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ABSTRACT

The philosophy and mission statements of both the American Physical Therapy Association and Nova Southeastern University's physical therapy program state that holders of a Master's Degree in physical therapy will be reflective practitioners with the ability to assess and reflect on their own performances. This research project is being proposed to develop and validate self-assessment criteria, beginning with the development of an interview guide to determine the self-assessment needs of students and graduates. At Nova Southeastern University, a problem-based learning approach is used with the intention to promote reflective practice. Three phases of the study have been designed: (1) the development of the interview guide; (2) data gathering through semi-structured interviews; and (3) plan development for implementation and evaluation of the project. Faculty members will be asked to recommend students with some self-assessment abilities. The sample will be adequate to obtain comprehensive descriptors, but the additional number cannot be specified at this proposal phase. Once the semistructured interviews are completed, data will be transcribed and verified by participants before an analysis to develop a plan. The plan will be validated with summative committee review by a committee of physical therapy educators. It is expected that this qualitative methodology will provide unique insight into the self-assessment of students and graduates of the Master's program in physical therapy. Nine appendixes present supplemental information and some cover letters and questionnaires from the initial stages of the research. (Contains 262 references.) (SLD)

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SITTING BESIDE ONESELF: DEVELOPMENT AND VALIDATION OF A
SELF-ASSESSMENT PROCESS FOR PHYSICAL THERAPY STUDENTS
AND GRADUATES AT NOVA SOUTHEASTERN UNIVERSITY

ED 424 253

Gina M. Musolino

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A major applied research project proposal presented
to Programs for Higher Education in partial
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degree of Doctor of Education

Nova Southeastern University

May, 1998

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by

Gina M. Musolino

May, 1998

The philosophy and mission statements of both the American Physical Therapy Association (APTA) and Nova Southeastern University Physical Therapy (NSU PT) purport that Master's in Physical Therapy (MPT) learners will be reflective practitioners (RP) with a dual ability to assess and reflect. NSU PT adopted the APTA standardized Clinical Performance Instrument, requiring MPT learners to self-assess, hence the potential need for development of self-assessment abilities.

Essential to the success of RP is the ability to self-assess, both formally and informally as a developing professional and in clinical practice. The purpose of this project is two-fold: to develop and validate the self-assessment

criteria and to create a plan based on this to incorporate self-assessment for MPT learners.

A qualitative development methodology will be implemented to collect data to address the following objective: to determine the self-assessment abilities of MPT learners and develop a plan for implementation and evaluation. To address this objective, the following research questions are proposed:

1. What are appropriate and valid interview guide contents to determine the self-assessment needs for MPT students and graduates?
2. What are appropriate and valid interview design to determine the self-assessment needs for MPT students and graduates?
3. What do MPT students and graduates recognize as self-assessment in their curriculum and clinical activities?
4. What barriers from peers, friends, professors, facilitators, colleagues, and others, if any, do MPT students and graduates experience in doing self-assessment?
5. What types and components of self-assessment training would be helpful for MPT students and graduates?
6. What are the essential elements to assure the incorporation of self-assessment for an MPT program or professional development course?

7. What is an appropriate plan for evaluation of the plan to incorporate self-assessment for an MPT program or professional development course?

Data collection will include an extensive literature review and transcriptions of audiotaped, semistructured interviews with MPT learners. Through this inductive process, results will be examined for relationships and patterns with subsequent consideration of codes and themes. Interviews will be conducted with the use of an interview guide developed from the literature review and validated by input from the formative committee. As a result of the development project, a curriculum program and plan for evaluation, validated by the summative committee, will be developed to address the self-assessment needs of MPT learners.

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INTRODUCTION

Overview of Nova Southeastern University

Nova Southeastern University (NSU) is an independent, nonsectarian, nonprofit university offering traditional and non-traditional programs of study from kindergarten through the doctoral level. The State of Florida chartered the university in 1964 and is currently the largest independent university in Florida. The Physical Therapy (PT) Program is a component of the Health Professions Division, within the College of Allied Health.

The PT problem-based learning curriculum is a new program, recently receiving an initial five-year, distinguished accreditation from the American Physical Therapy Association's (APTA, 1996) Commission on Accreditation of PT Education. The PT program, based at the Ft. Lauderdale campus, employs problem-based learning (PBL) exclusively as the method of andragogy.

Nature and Significance of the Problem

The philosophy and mission statements of both the APTA (see Appendix A) and NSU PT (see Appendix B) purport that students will be reflective practitioners (RP) with a dual ability to assess and reflect, in addition to demonstrating knowledge, achievement, and personal growth as a developing, professional physical therapist. The APTA (1998a) recently developed the Clinical Performance Instrument (CPI) for the

purpose of evaluation of clinical affiliates. Following implementation of the CPI (see Appendix C), student physical therapists on clinical affiliation must self-assess in conjunction with their clinical faculty assessment. In 1998, NSU PT adopted as a measure of clinical performance, the instrument developed by the Task Force on Student Clinical Performance, APTA CPI (1998a). This was a logical progression for the university program from the use of the former self-assessment (non-standardized) instrument utilized for clinical education experiences, hence the potential need for further development of self-assessment abilities. The CPI was developed by APTA as a method to measure all clinical affiliates on the same instrument.

Currently, the majority of programs implement a multitude of non-standardized instruments, such as those developed by the New England and Texas Clinical Consortia and various other non-standard instruments self-developed by physical therapy programs. The CPI is intended to be uniformly adopted by PT programs to "ensure that all practitioners entering practice have demonstrated a core set of clinical attributes" (APTA, 1998a, p. ii). The APTA CPI is currently undergoing psychometric testing trials for content, concurrent and discriminate validity, interrater reliability, factor analysis and internal consistency (J. Gandy, personal communication, April 28, 1998). Development

of the CPI was a natural evolution in light of publication and adoption of the following documents by the APTA: A Normative Model for Physical Therapist Professional Education: Version '97, Guide to Physical Therapist Practice, Part One and the new Evaluative Criteria for the Accreditation of Physical Therapist Professional Education Programs (APTA, 1998b).

As the CPI comprises self-assessment (Appendix C) as the measurement of attainment of clinical criteria for the student affiliate, it is germane to incorporate appropriate development of this skill for both students and graduates. Although the CPI brings the issue of self-assessment to the forefront of physical therapy curriculum instruction, this skill is far-reaching in terms of influence within the scope of a professionals' practice.

The mission of the NSU PT Program is to prepare physical therapists as primary health care providers, who are lifelong learners and reflective practitioners. "Lifelong learning requires that individuals be able not only to work independently, but also, to assess their own performance and progress" (Falchovic & Boud, 1989, p. 395). The concept of an RP entails questioning assumptions in practice, for personal growth, by deliberately taking time to recall and analyze actions taken and the processes used to arrive at these actions (Schon, 1987). A portion of the mission statement for NSU delineates that,

. . . Nova Southeastern University prepares students for lifelong learning and leadership roles in business and the

professions the University fosters inquiry, research and creative professional activity by uniting faculty and students in acquiring and applying knowledge in clinical, community, and professional settings. (NSU, 1997)

Although the NSU PT Program philosophy states that the program graduates professionals who are self-directed lifelong learners, it is unknown to what extent these RP characteristics are being attained by program students during their professional studies and novice clinical practice. In addition, according to the Commission on Accreditation of Physical Therapy Programs (APTA, 1997, pp. 1175-1187), physical therapists should be able to reason clinically and analyze critically using scientific principles and function as life-long learners upon graduation. "Self-assessment is a systematic approach to the challenge of staying current, an approach that provides educational guidance while leaving the individual learners in control of their own professional development" (Klevans, Smutz, Shuman & Bershad, 1992, p. 17). Therefore, self-assessment is a method to help professionals better understand inherent learning needs to determine how to perform effectively. According to Klevans, et. al. (1992, p. 18) most professionals do not acquire the requisite skills to be effective lifelong learners in professional education andragogy. With few exceptions, a fostering of self direction and independence in learning is not characteristic of professional education.

Most medical schools and residency programs, according to Westberg and Jason (1994) offer little or no attention to fostering learners' reflection or self-assessment (p. 278). Yet learners that do not value or are ineffective with respect to self-assessment and reflective capabilities are unlikely to extract the optimum benefit from a professional education. "Medicine is dominated by unreflective doing" (Westberg & Jason, 1994, p. 278). Reflection and self-assessment are fundamental to initiating appropriate self-directed learning and change. These strategies deserve to be considered basic elements of professional development.

Self-assessment represents a technique through which professionals take responsibility for their professional development. By grounding the process in professional practice, individuals should be in an informed position to select learning activities that have an immediate and direct relationship to that practice. The intent of self-assessment is to empower individuals to more effectively engage in performance-related continuing education. (Klevans, et al., 1992, p. 18)

However, in health professions instruction, self-assessment abilities are rarely rewarded and seldom cultivated (Gordon, 1991, 1992, Small, Stevens & Duerson, 1993, Wu, Folkman, McPhee, & Lo, 1991). "When students are not helped to learn the skills of self-assessment, their assessments of their knowledge and performance are artifacts of their global self-concepts and are potentially misleading" (Gordon, 1992, p. 673).

In 1995, the American Physical Therapy Association's Board of Directors commissioned a predictive workforce study conducted by Vector Research, Inc. (1997) of Michigan. For more than a decade, PT has been listed among the top ten most desirable job opportunities based on the United States Bureau of Labor statistics reports and anecdotal evidence of personnel shortages. However, an 11% surplus of physical therapists is predicted by the year 2000 and a 20-30% surplus by 2005-2007, according to the Vector study. Although this is good news for the consumer who has had inadequate access to PT in underserved areas, the physical therapists must be more prepared to enter an increasingly competitive job market under the auspices of managed health care. Therefore, PT educators must assist in the self-assessment process and recognize the need to develop competent, life-long learning professionals, with the ability to self-assess as reflective practitioners.

Activities that are not checked by observation and analysis are usually intellectually dead-ended, leading neither to greater clarification nor to new ideas. When learners rush from one activity to another, they are at risk of mindlessly repeating bad habits and failing to learn from their experiences (Westberg & Jason, 1994, p. 278). Schon (1987, 1992) invites the professional educator and learner

an opportunity to engage in thinking and reflecting about the epistemology of professional practice.

Purpose of the Project

The purpose of this project is two-fold: to develop and validate the self-assessment criteria and to create a plan based on this to incorporate self-assessment for Master's in Physical Therapy (MPT) learners. The only study addressing self-assessment abilities specific to the profession of physical therapy was completed by Orest (1995). Shepherd and Jensen (1994) touched upon the concepts of reflective practice in a rare piece of qualitative research in the profession of physical therapy. Also, Jensen and Denton (1991) recommended development of further activities for reflective practice following a study exploring the practice of journaling by clinical affiliates. Other than the novel works of Shepherd and Jensen (1994) comparing the attributes of the novice and experienced PT clinician, and Orest's (1995) study, there is a paucity of literature with respect to the topic of self-assessment in the profession of physical therapy.

Orest (1995) determined several areas that should be addressed in future studies pertaining to self-assessment. Hence, for the purposes of this study, Orest's recommendations will be considered foremost. Development of self-assessment criteria would focus on determining the following: (a) provision

of an interview guide for self-assessment; (b) evidence of the ability of MPT students and graduates to recognize self-assessment; (c) identifying barriers to self-assessment for MPT students and graduates; (d) determining the types of support or lack of support for self-assessment for MPT students and graduates; and (e) assessing the need for formal training for self-assessment improvement and the types of training desired by MPT students and graduates, with a plan for implementation and evaluation. These considerations parallel those of Westberg and Jason (1993) espousing that learners cannot be expected to evaluate themselves until progressing through stages in the sequence of learning described as:

1. Unconsciously incompetent
 2. Consciously competent
 3. Consciously competent and
 4. Unconsciously competent.
- Learners who do not yet know that they do not know something cannot evaluate themselves in that area. Learners in stages two through four can self-critique.
(p. 17)

BACKGROUND AND SIGNIFICANCE OF THE PROBLEM

The development of a plan for self-assessment for MPT learners must include a review of the background and significance of five major areas including: (a) reflective practice and theory; (b) curriculum practices that foster reflection, including an overview of problem-based learning (PBL) and evaluative processes; (c) program evaluation processes; (d) self-assessment and practice considerations; (e) the generic outcome abilities in physical therapy; and (f) qualitative

research methodologies. This section provides a deliberation in each contextual area with reflection with respect to the contemporary significance for the health professions.

Reflective Practice and Theory

Essential to the success of reflective practice is the ability to self-assess, both formally and informally as a developing professional and in clinical practice. Brookfield (1995, p. 22) asked why critical reflection is important. This researcher believes it helps developing professionals to take informed actions and facilitates development of a rationale for practice. Brookfield (1995, p. 25) maintains critical reflection enlivens developing professionals' learning environments and increases democratic trust. He speaks of the multiple lenses from which professionals can grow and develop, if provided the opportunity to reflect (1995, p. 29).

Schon (1992) argued that a contemporary crisis exists, in professional knowledge and education, because of a widening gap between thought and action. Today, there is an unprecedented requirement for adaptability and tension exists between theory and practice. Schon (1992) contemplated how professionals readjust to the influences, and changes, as the professional practices "knowing in action, recognizing surprise, reflection-in-action, experimentation and reflection-on-action" (pp. 119-140).

The reflective practice model combines the art of medicine, a zone characterized by uniqueness, conflict, and ambiguity, with the zone of mastery or the science of medicine (Schon, 1987). Ostermann and Kottkamp (1993) define reflective practice as a "professional development strategy designed to enable professionals to change their behavior, thereby improving the quality of their performance" (p. 66). These authors argued that reflective practice is neither a solitary nor a relaxed meditative process. Rather, it is a demanding practice that is most often successful in a collaborative mode. The purpose of reflective practice is two-fold: (a) to initiate a behavioral change, and (b) to realize an improvement in professional practice. RP expose the discrepancy between theory and practice and create a self-awareness of the unacceptable outcomes and drive toward a new behavioral change for development.

Reflection Theory

Dewey (1933) purported reflection as a cognitive activity which begins in perplexity and "fork-road" situations, but is an active persistent careful consideration of any belief or knowledge. This cognitive activity includes a responsibility for future consequences and is both retrospective and progressive. Dewey delineated five stages of reflective thought:

1. Perplexity, confusion, doubt; 2. Attentive interpretation of the given elements; 3. Examination, exploration and analysis to define and clarify the problem; 4. Elaboration of the tentative hypothesis; 5. Testing

the hypothesis by doing something overtly to bring about anticipated results. (p. 33)

Kolb (1984) took these points into consideration in the model of the Experiential Learning Cycle, but purported that reflection should be to take action to a new and changed behavior. Kolb's model of experiential learning moves through a continuous cycle of concrete experience, reflection observation, abstract conceptualization, and active experimentation. Through examination, application, explaining, and experience, learners have the opportunity to develop in multiple modalities and cycles through input of information and further processing of the information. Often times, reflection is thought of in just an overarching way only, not as an integral component of learning.

Brookfield (1995, p. 22) asked, Why is critical reflection important? This researcher believes it helps developing professionals to do a number of things to foster reflection. Critical reflection facilitates professionals to take informed actions and develop a rationale for practice. It ameliorates professionals to avoid self laceration and grounds us emotionally. Brookfield (1995, p. 25) maintains critical reflection enlivens developing professionals' learning environments and increases democratic trust. For example, a physical therapist might consider the positive or negative characteristics regarding a patient interaction and cogitate

on aspects of these encounters. During subsequent therapeutic communications the physical therapist may then implement the lessons of experience from the contemplation on former actions, in the future action as a developing reflective practitioner. Brookfield (1995, p. 29) speaks of the multiple lenses which professionals can grow and develop from, if provided the opportunity to reflect.

Reflective Practice

Schon (1992) argued that a contemporary crisis exists, in professional knowledge and education, because of a widening gap between thought and action. Schon believes that the problem is managing the complexity as the challenges. Today, there is an unprecedented requirement for adaptability and tension exists between theory and practice. Schon purports reflection in action, reflection on action and knowing in action considerations and believes that these good practices will generate new knowledge. Schon's concepts of the reflective practitioner have been considered in architecture, medicine, law and other professions. The artistry of reflection was explored in Schon's writings. Schon contemplated how professionals readjust to the influences, and changes, as the professional practices knowing in action, recognizing surprise, reflection in action, experimentation, and reflection on action (pp. 119-140).

Schon's Model of Reflective Practice is based on how

professionals think and it emphasizes learning from experience. Therefore, the query is raised, how do expert teachers impart this artistry of practice in professional education? How do educators convey to learners what professionals do in clinical practice no matter where the learners are located on the learning curve? Schon's Model of Reflective Practice provides a conceptual framework for answering these questions. The reflective practice model combines the art of medicine (a zone characterized by uniqueness, conflict and ambiguity) with the zone of mastery or the science of medicine (Schon, 1987).

Hatcher and Bringle (in press) echo Schon's sentiments, reflection activities develop self-assessment skills as a life-long learner and explore and clarify values that can lead to civic responsibility. Hatcher and Bringle believe reflection activities serve to:

engage students in the intentional consideration of their experiences in light of particular learning objectives, and provide an opportunity for students to: (a) gain further understanding of the course content and discipline, (b) gain further understanding of the service experience, (c) develop self-assessment skills as a life-long learner, and (d) explore and clarify values that can lead to civic responsibility.

These activities incorporate learning from experiences in society, such as through clinical experiences in physical therapy.

Similarly, Eyler, and Giles (1994, pp. 327-339), delineated the 4 C's of reflection: Continuous reflection, Connected

reflection, Challenging reflection and Contextualized reflection, with these ongoing processes as requirements for reflection. The researchers recommended that service activities or clinical experiences should occur on an ongoing basis, as a continual component of the curriculum, not merely at the middle and end of the programming.

Transforming RP didactic skills into actual clinical abilities may require a transformative process for the novice clinician. Alspach (1995) discusses Kramer's phases of reality shock for the new graduate nurse. These steps proceed, if steps progress, from the honeymoon, to shock, to recovery, and resolution. In the end the ideal is that the new graduate will resolve the "perceived conflict between work and school values either by rejecting one set of values or the other, or (ideally) integrating the positive aspects of each set of values into one set that is realistic for the work setting; the term biculturalism refers to this blending of school and work value systems" (p. 206). With consideration of these phases, for the new graduate, it is important to offer support as the new graduate develops. Clinical faculty serve a prominent and ever-changing role in offering appropriate support, as new health care graduates go through these professional cultural adjustments.

According to Alspach (1995), "the capacity to solve problems is one of the hallmarks of professional practice" (p. 251). In addition, health care professionals must be capable of employing competent clinical decision making skills. As educators cannot predict the future of how health care will be delivered, however, educators can predict that health care workers will need to be capable of these methods of critical analysis. Therefore, the need to identify competency in these skills or recommend continuing education to address any gaps in the process of steps in the decision making model.

Curriculum Design Methods

In medicine, Beecher, Lindemann, Morzinski, and Simpson (1997) studied the use of the educator's portfolio to stimulate reflective practice among medical educators and found that all ten faculty who participated in structured interviews regarding preparation of education portfolios for promotion, indicated that reflection had emanated. These researchers discovered four areas of reflection that ensued: "(a) surfacing of dilemmas in practice, (b) seeking supports, (c) reformulating educational practice, and (d) transformation of educational practice" (p. 56). Hutchings (1993) recognized and concluded that portfolios, "virtually force reflection and growth" (p. 1). Seldin (1993) reported that the mere act of creating a portfolio stimulates rethinking and planning for the future.

In terms of the health professions, Jensen and Saylor (1994) sampled three courses of health professions students developing portfolios as part of the students' course requirements for both master's degree Physical Therapy and baccalaureate nursing students. Jensen and Saylor collected data in product form i.e., the portfolios and evaluation data, and student and instructor assessments. Each class was given general guidelines for the portfolio assignment. Based upon qualitative evaluation, Jensen and Saylor suggested that the pilot portfolio project provided an avenue for student reflection on professional development. However, the portfolios varied in structure and complexity. Jensen and Saylor specified further refinement and research in the area of portfolios was required for the health professions.

Reflection and Assessment Considerations

Portfolios, used for a long time in fields such as writing and the fine arts, have recently been implemented as assessment strategies in fields such as teacher education (Arter & Spandel, 1992; Campbell, et al., 1997; Green & Smyser, 1996) and nursing and service professions (Hatcher, 1995; Hutchings & Bringle, 1993; and Williams & Driscoll, 1997). In addition to simply providing new types of evidence in a different format, portfolio assessment also allows students and teachers to be allies in the evaluation process (Mathies & Uphoff, 1992) and provides

a structure and process to facilitate reflection among students, often constrained by a model of technical rationality.

Williams and Driscoll (1997) proposed the following guidelines for facilitating student reflection: "Reflection should be structured as an ongoing aspect of the course; offered in multiple forms; included in assessment; modeled by the instructor; connected to course content; and supported by class context" (p. 41). The researchers suggested that reflection should take place at least weekly, and range from large group reflection to dyads, triads, journals, and drawings. Williams and Driscoll concluded that exams need to provide a connection to reflection activities and reflections should be not only thought about, but written about, as well as connected to specific curriculum components. For example, in physical therapy, learners could be asked to reflect upon a patient interaction vignette and questioned regarding what ethical principles guided the students' activities during the interaction and why these principles were pertinent in the ethical encounter. These activities demand that the learning environment is supportive, offers dual respect, and that judgments are not made with respect to the student learners' reflections.

Hatcher and Bringle (in press) offer the following guidelines for effective reflection activities, linking experience to learning, guiding the process, completing

reflection regularly, allowing for feedback and assessment, and fostering the exploration and clarification of values. Hatcher and Bringle concurred with Williams and Driscoll's (1997) guidelines and further elaborated on the variables impacting selection and design of reflection activities. Hatcher and Bringle (in press) provided a list of over 50 different examples of reflective activities including, personal journals, directed writings and readings, assessment techniques, ethical case studies, student portfolios, personal narratives, and experiential research papers. Angelo and Cross (1994) offered other specific assessment techniques for reflection in the classroom, including the minute paper, the muddiest point, dialogue writing, double-sided journal, pro/con grid, and self evaluations. According to Angelo and Cross, the reflection efforts must not be an add-on.

Shepherd and Jensen (1994) concur that reflection activities should be intertwined throughout professional PT curriculum and that if learners understand more about the professional development process, this could have potentially important consequences in terms of graduate outcomes. Shepherd and Jensen (1994) purport the graduate outcomes that will improve with reflective activities include lifelong learning, self and peer assessment, and autonomy as a health care professional (pp. 711-722). These researchers strongly recommended the portfolio

assessment as the clearest, yet most complex, method of individual and curricular evaluation. Beecher, Lindemann, Morzinski and Simpson (1997) also supported the use of faculty portfolios for reflective practice, promotion and development for medical school educators.

Overview of Problem-based Learning (PBL)

The Physical Therapy Program at Nova Southeastern University (NSU PT) is a problem-based learning (PBL) curriculum. One of the aims of PBL was to place emphasis on the development of a reflective practitioner (RP) by teaching the student to learn from and solve problems. Curriculum content is organized around carefully designed and guided clinical patient problems which students study, discuss, and research in small teams (tutorials). In this way, the students synthesize information as it is relevant to the clinical problem. Simply put, PBL encourages students to learn using a process similar to that used to solve problems in clinical practice (Albanese & Mitchell, 1993; Barrows, 1997).

When looking at the problems in a profession as the content of learning experiences, it becomes evident that PBL promises to be an appropriate means of learning, to achieve RP. According to Bridges (1992), PBL has the potential to link theory and practice. Bridges believes the PBL strategy avows to deliver more of an improvement of practice in the field than the current

efforts to transmit conceptual knowledge in a traditional lecture format. This juxtaposition of experience and theory makes the difference.

Employing PBL in PT education is purported to assist in the development of a reflective, lifelong learner. Koschman, Kelson, Feltovich, and Barrows (1996) described the components of PBL as including the intermatrixing of problem formulating, self-directed learning, reflecting, abstracting, and applying knowledge. However, educational systems are producing graduates that fall short of the expectation of being capable of, among other things, reflecting upon the performance and continuing the process of learning. This is part of the researchers' argument for utilizing PBL methodology in curriculums. Grant Wiggins (1997), of the Center on Learning, Assessment and School Structure, echoed these considerations, claiming that no learning takes place without feedback and problem-based learning builds feedback in the loop, showing true understanding and skill. A central principle to PBL is the responsibility for students' own learning and in an eventual life-long fashion. PBL students, it is believed, develop an ability and confidence to direct their own learning through a process of inquiry and reflection, with the curriculum providing this opportunity (Barrows, 1997; Hadwin, 1996; Vasconez, Donnelly, Mayo & Schwartz, 1993).

In a study by May, Morgan, Lemke, Karst, and Stone (1995), practicing physical therapy clinical educators listed commitment to learning, problem-solving, responsibility, professionalism, and critical thinking in the top ten generic abilities or attributes for the profession (p. 4). In light of health care reform and the environments in which NSU MPT graduates will be employed, the role of reflective practice should parallel the clinical readiness the future clinicians will need in practice. A reflective practice, according to Ostermann and Kottkamp (1993), is based on six key assumptions:

- (1) Everyone regardless of age, stage or attitude needs professional growth opportunities.
- (2) All professionals have a natural desire to want to improve.
- (3) All professionals want to learn.
- (4) All professionals are capable of assuming responsibility for their own professional growth and development.
- (5) All people need and want information about their performance.
- (6) Collaboration with other professionals enriches one's professional development. (p. 33)

Furthermore, Williams and Driscoll (1997, pp. 34-41) criteria concur with those assumption of May, et al. (1995). These guidelines are mirrored by Hatcher and Bringle (in press) in their specifications for effective reflection activities, "link experience to learning, are guided, occur regularly, allow feedback and assessment, foster the exploration and clarification of values." Hatcher and Bringle offered the following examples of reflection activities, personal journals, directed writings

and readings, case studies, portfolios, assessment techniques, experiential research, and personal narratives.

Allyson Hadwin (1996), analyzed and interpreted qualitative data from a PBL group in a faculty of medicine, with 29 medical students in both focus groups and interviews. In a semi-structured interview, the researcher gleaned that there seemed to be a distinct difference between "going through the motions of PBL and really engaging in PBL" (p. 26). The researcher surmised embedding the theory and practice of self-regulation in a community of learners model. The distinction was evident, per Hadwins' analysis, that the role of the PBL tutor in making the PBL experience useful or not re-emerged in interviews as an important theme. Hadwin (1996) emphasized the following constructs as significant implications for the design of PBL learning environments: "1. Content learning is situated in relevant activities. 2. Knowledge is socially constructed. 3. Expertise is distributed and shared amongst participants. 4. Participants engage in behaviors characteristic of self-regulated learning" (pp. 12-13).

Hadwin (1996) acquiesced with the principles purported by Schmidt et al. (1993), viewing the tutor as an "orchestrator" in the learning community. Hadwin discerned the tutor as employing the following roles, "(a) The tutor strategically employs content and process expertise in the learning practice of the community;

and (b) The tutor employs content and process expertise through the strategic use of questioning, feedback and scaffolding" (p. 23) in order to be effective as a tutor. The facilitator must guide the learning process, not direct the learning. The timing of questioning demands metacognitive activity and feedback needs to relate to both content and process expertise for the learner. Scaffolding allows for the novice tutor groups to be given more direction with a gradual development toward total independence in learning (Albanese & Mitchell, 1993).

Specific criteria for evaluation measures in PBL included compatibility with the learning objectives and process, assessment of resources and shared responsibility for learning. A plethora of content criteria areas in PBL evaluation have been considered; these included items for advisement, interpersonal relationships skills for students and faculty, consideration of instructional methods and styles, structure and process, philosophy, knowledge, behavioral and affective considerations for students and faculty, tutor roles, and linkage back to the curriculum. These shifts in evaluative measures from faculty to student and from content to process, reflect the change in the learning process from passive to active, and from teacher directed to learner directed with self evaluation. These educational evaluative measures mirror the changes in the practice environment in health care (Albanese & Mitchell, 1993;

Barrows, 1997; Hadwin, 1996; King, 1993; Vasconez, Donnelly, Mayo, & Schwartz, 1993, West, 1966).

Des Marchais and Chaput (1997) validated and identified eight specific tutor tasks as part of an undertaking to develop a comprehensive tutor training system at the University of Sherbrooke. The eight tutor task items were as follows:

1. Manage the PBL method,
2. Facilitate the functioning of a small group,
3. Guide the study of specific contents,
4. Favor autonomy,
5. Favor Humanism,
6. Stimulate motivation,
7. Evaluate learning,
8. Collaborate in the administration of the study program. (p. 70)

The researchers further defined each criteria into competencies for tutors to complete a self-assessment of their current and expected level for future tutorial functioning. This allowed the tutor to self-regulate, develop and grow as a faculty PBL tutor in a learning community.

Significance to the Institution

The need for fostering the characteristics of reflective practice in professional education is evidenced in the literature review. These construct dimensions of RP have been considered predominantly from a qualitative perspective and few studies have been attempted in terms of quantitative measures of RP characteristics. PBL is an instructional methodology designed to aid in enhancing RP characteristics. Although educators are purporting RP, outcome measures are needed to ascertain the extent to which the RP characteristics are being attained by

students in the health professions. The reflective teaching instrument (RTI) was an attempt to quantify the RP characteristics in the profession of education and may be appropriate, with modification, to measure RP characteristics in a quantitative fashion for professionals in other disciplines (Kirby & Teddlie, 1989).

Musolino (1997b) compared the reflective practitioner (RP) characteristics of first year and second year (graduate candidates) NSU MPT students, to determine whether there was a statistically significant difference in RP construct dimension characteristics. This study investigated the RP characteristics of professional MPT students at NSU enrolled in the PBL MPT curriculum. This curriculum design and the alignment with the NSU PT mission and philosophy statements (see Appendix B) were parallel with the expectations noted in the literature regarding this method of andragogy (Albanese & Mitchell, 1993; Barrows, 1997; Bridges, 1992; Hatcher & Bringle, in press; Williams & Driscoll, 1997; Vasconez, Donnely, Mayo & Schwartz, 1993).

Reflective practitioner characteristics have been identified in the literature as a foundation for bridging theory and practice (Argyis, 1991; Brookfield, 1995; Schon, 1987) and the need for the NSU MPT students to possess these characteristics was noted. In particular, the aspects of RP were noted as necessities for the developing professional and

continued professional growth and development for decision-making purposes (Brookfield, 1995; Dewey, 1933; Kolb, 1984; Ostermann & Kottkamp, 1993; Schon, 1992). Also, in terms of RP activities, both self-assessment skills as life-long learners and clarification of values for professional responsibility are evidenced, resulting in a collaborative mode of reflection and cogitation (Eyler & Giles, 1994; Hatcher & Bringle, in press; Ostermann & Kottkamp, 1993). In terms of outcomes in professional education, the need for problem-solving capacities and clinical decision-making skills were noted as hallmarks for professional practice (Alspach, 1995; Bridges, 1992). Reflection and experience were purported to be in parallel to achieve action and a new and changed behavior (Kolb, 1984; May, Morgan, Lemke, Karst & Stone, 1995; Schon, 1987, 1992).

Researchers Kirby and Teddlie (1989) attempted to provide an instrument to measure, in a quantitative fashion, the RP characteristics of professionals in education. This work was seminal, as noted in the literature, that only qualitative measures (Hadwin, 1996) had been completed in the past, in terms of RP characteristics. Efforts are forthcoming from a professional education university to add to the body of quantitative research for RP characteristics, per communication with a director of a school of medicine (H. Barrows, personal communication, July 8, 1997).

The conclusions drawn from Musolino's (1997b) study demonstrated there was no significant difference, at the .05 level, (critical value, 1.65) between first year MPT students' and second year NSU MPT graduate candidate students' RP characteristics, as measured by the reflective practitioner instrument. In fact, several construct dimensions were, in terms of the calculated t-value, greater for the first year students than the second year students. The construct categories, for the purposes of the RPI included: diagnosis, teaching, and personal causation. Major drawbacks noted with this study were problems of both internal and external validity of the instrument which posed significant limitations. As the RPI (modified RTI) had not been tested for validity or reliability, the study was merely a pilot in terms of instrument utility. The reliability and validity of the RTI cannot be assumed for the RPI. This further limits the generalizability of the results. Generalizability was further confounded by the fact that only the construct dimensions of Kirby and Teddlie's (1989) research were considered as this was the only quantitative instrument to measure RP characteristics, and other dimensions may exist in terms of RP.

While NSU MPT students are exhibiting RPI characteristics, this does not appear to be influenced, as a result of this study, by the NSU PT PBL curriculum from year one to year two. The NSU PT PBL curriculum was intended to foster RP construct domains.

However, the RP characteristics may be gleaned in the first year or may not, in actuality, be fostered with the activities in the second year and through clinical education experiences. Also, PBL is dependent upon skillful tutors and perhaps the program faculty had evolved as more skillful tutors for the first year students, as opposed to the tutor abilities with the prior second year students. As no antecedent studies of this nature had been conducted, this study provided a benchmark to begin investigating the influence of the curriculum activities and reflective practitioner characteristics of NSU MPT students and graduates.

Some reflective practitioner activities, such as the reflective Schon log, reflective journaling and the clinical decision-making model have been incorporated into the PBL curriculum. This study aided in determining whether these activities were adequate in producing students with RP characteristics in the second year as compared with the first year students' curriculum activities. However, the NSU physical therapy curriculum is inverted from most traditional programs. Students learn first how to think about patient problems and select, perform, and analyze assessment information and in the second year expand into treatment activities. Indeed, reflection activities begin at the outset of the curriculum; however, these should be further enhanced as professional development ensues.

For second year students, the external curriculum, clinical education, may have been a confounding variable. More intensive efforts may need to be considered in the curriculum development process, to foster RP constructs. The results of Musolino's (1997b) study offer evidence of the RP characteristics of NSU MPT students.

NSU PT graduates (entry-level clinicians) are exhibiting RP characteristics as evidenced by the RPI. However, these RP characteristics were not significantly greater during the second year as compared to the first year for NSU PT students and graduates. Therefore, consideration to strengthen the reflective curriculum components that develop RP characteristic was indicated. Consequently, the need for further qualitative investigation and standardization of quantitative instruments for the purpose of further investigation of these RP characteristics was noted.

It was recommended by the researcher to the acting program director and faculty that a plan to develop increased self-assessment be considered in 1998 (see Appendix D). A more formalized approach to incorporating self-assessment and other RP enhancement activities warrants further consideration and investigation for the developing professional. Further qualitative analysis was suggested by the researcher to glean descriptive information with respect to the RP qualities of NSU

MPT learners. Hence, the need for this study to develop and validate the self-assessment criteria and creation of a plan to incorporate self-assessment for the MPT learners and graduates.

Program Evaluation Processes

When developing a new program, the merits of evaluating the plan must be considered. Mason (1993) reports that the challenges and opportunities presented by evaluation are tremendous. But the risks are great, for if the evaluation is not properly conducted or is weak, then the education practice and program being evaluated are jeopardized. Svinicki (1993) agrees that, because so much depends on evaluation, it is important to try to make the evaluation as free from irrelevant errors as possible. She proposed utilization of the "four R's in evaluation; relevant, reliable, recognizable and realistic" (p. 3), as a way to ensure the quality of an evaluation system. Worthen and Sanders (1993) recommend reviewing evaluations to determine what worked and what did not. The researchers delineated eleven characteristics of a good evaluation. These included:

1. Conceptual Clarity-the extent to which the evaluation is well-focused and the purpose, role and general approach are clearly stated.
2. Characterization of the Object of the Evaluation-the extent to which the evaluation contains a thorough, detailed description of that which is evaluated.
3. Recognition and Representation of Legitimate Audiences-the extent to which all evaluation audiences had a voice in focusing the study and an opportunity to review results.
4. Sensitivity to Political Problems-the extent to which the evaluation has been sensitive to and coped

satisfactorily with potentially disruptive political, interpersonal and ethical issues. 5. Specification of Information Needs and Sources-the extent to which the evaluation specifies needed information and sources of that information. 6. Comprehensiveness & Inclusiveness-the extent to which the evaluation has collected data on all important variables and issues, without getting bogged down in inconsequential data. 7. Technical Adequacy-the extent to which the evaluation design and procedures yielded information that meets scientific criteria of validity, reliability and objectivity. 8. Consideration of Costs-the extent to which the evaluation considered cost factors along with other variables. 9. Explicit Standards & Criteria-the extent to which the evaluation contained an explicit listing and/or discussion of the criteria and standards used to make judgements and recommendations by the data. 10. Judgments and/or Recommendations-the extent to which the evaluation goes beyond reporting findings to offer judgments and recommendations suggested by the data. 11. Reports Tailored to Audiences-the extent to which the evaluation reports are provided at appropriate times and in appropriate formats to the identified audiences for the evaluation information. (pp. 382-383)

The objective-oriented evaluation determines the extent to which objectives of the course, instruction, or program have been achieved. The objectives that were used in the program design are used in the evaluation. The strengths of this model were that it was reality oriented, it had measurable criterion (objectives) from which to work, and the relationship between evaluation and improvement is apparent. Models for evaluation or steps for evaluation processes have been developed by both Tyler and Taba (Joyce, Weil & Showers, 1992; Kemp, Morrison, & Ross, 1994). Critics of these models complain that the process focuses on the stated objectives and sometimes important data about unintended outcomes are overlooked. Bolman and Deal (1997)

distinguish the challenge of accreditation as keeping on top of large, complex sets of activities, because organizations are complex. Bolman and Deal related that "the complexity is compounded even further when a number of different organizations are involved" (p. 22). Bolman and Deal describe the properties of organizations as being "complex, surprising, deceptive and ambiguous, much of the time events and processes are so complex, scattered and uncoordinated no one can fully understand--let alone control--what is happening" (pp. 22-24). Evaluations take considerable effort, time and money and produce lengthy reports and ceremony. Bolman and Deal relate that "rarely are insights or recommendations heeded" (p. 244). However, the authors also believe, "evaluation is necessary to ensure a responsible, serious, and well-managed image" (p. 244). Speaking of accreditation results, Bolman and Deal purport that, "negative results are often couched in vacuous language with high-sounding recommendations that no one is likely to take very seriously. Attempts to solve the problems disappear after the ceremony is over" (p. 245).

A systematic method to plan, develop, evaluate, and manage the instructional process is needed to ensure competent performance by learners (Kemp, Morrison & Ross, 1994, p. 6). The completion of this process requires in depth knowledge of instructional design, methods of progress evaluation, and the

role of the students, faculty, and clinical faculty. Considering the differences between expected outcomes and reality will serve to identify gaps in the curriculum and as a needs assessment for continuing education needs of new professionals.

Self-assessment and Practice Considerations

According to Klevans, Smutz, Shuman, and Bershad (1992) the purpose of self-assessment is to guide professionals to "better understand their learning needs so they can tailor their plans for professional development" (p. 17). Using external, profession-based criteria (such as the generic abilities and APTA education documents in physical therapy) learners may self-test against these criteria in order to ascertain their learning needs. Klevans, et al. (1992) determined, based on a program for self-assessment developed in architecture, that there are four key elements to an appropriate vision or plan for self-assessment. These include learning tools and resources that will assist the learning more efficiently and effectively, individual focus on the learner in the process, exposure for the learner to new concepts and ideas with the opportunity for structured reflection on practice, and individual evaluation that should motivate learners to continue learning and act on deficiencies (pp. 18-19).

In the health professions, the advancement of technology and the science of medicine continue at alarming rates, such that

learning becomes obsolete (Arthur, 1995; Klevans, et al., 1992; Sutherland & Bonwell, 1996; West, 1966). Direct instruction may promote passivity within learners, yet solving a problem, may foster active learning (Barr & Tagg, 1995; Barrows, 1996, 1997). However, non-teaching may require more time and effort on the part of the learner and professor (Barrows, 1996, 1997). Students do not begin to learn until asking questions of themselves (West, 1966). Much of what the future clinician needs to know for practice is not even yet known and consequently cannot necessarily be taught. Hence, the importance in education lies in being able to teach learners how to acquire knowledge in the health professions. Learners must master how to self-assess learning abilities in relation to the contemporary expectations and meeting the needs and responsibilities of patients and clients (Barrows 1994, 1996; Shepherd & Jensen, 1994; West, 1966).

Westberg and Jason (1994) note how the process of self-assessment is inextricably linked to achieving the maximum benefit from professional education in order for students to become safe providers of health care. These family medicine educators and researchers discuss the problems with reliance on authoritarian educational approaches and provide compelling rationales for nurturing self-assessment and reflection.

If medical students are to become effective and competent, growing throughout their careers, they must value and

possess the skills required for pursuing ongoing learning. Reflection and self-assessment are fundamental to initiating appropriate self-directed learning and change. They deserve to be considered basic elements of professional development. However, in health professions education, self-assessment skills are seldom cultivated or rewarded. (pp. 278-279)

Westberg and Jason (1994) divulge alarming statistics that less than half of practicing physicians engage in self-assessment and only ten percent complete audits of their practice. This does not appear to be the type of health care provider most of the population would entrust for health care services. Reflection and self-assessing takes time in the already hectic health professions, however, these collaborative efforts must be implemented (Schon, 1983, 1987) to facilitate future professionals to avoid the pitfall of "mindlessly repeating bad habits and failing to learn from their experiences" (Westberg & Jason, 1994, p. 278). Albeit expected of all health professionals, self-assessment abilities are infrequently addressed directly in training.

Ultimately, health professionals must develop the capacity to function independently, at least most of the time. Basic to sustained competence and needed growth are a commitment to ongoing reflection and effectiveness at self-assessment. Without these inclinations and capabilities, the performance of professionals is at risk of stagnating, even deteriorating. Many of our traditions in health professions education promote unreflective doing and mitigate against the development of the kind of openness and trust needed for practicing and refining the skills of self-assessment. (Westberg & Jason, 1994, p. 281)

With an extensive review of the literature pertaining to the topic of self-assessment (Calhoun, Ten Haken & Woolliscroft, 1990; Kolm & Verhulst, 1987; Falchikov & Boud, 1989; Gordon, 1991, 1992; Larisey, 1994; Morton & Macbeth, 1977; Woolliscroft, Ten Haken, Smith & Calhoun, 1993) it is notable that most methodologies have focused on comparing the ability to self-assess to the faculty or peer assessment, hence ignoring the process of self-assessment. Falchikov and Boud (1989) raise more appropriate questions, "Are students able to assess themselves?" and, "What might account for the variation in students' abilities to assess their own performance?" (p. 396). Gordon (1992) discovered in a review of 11 studies pertaining to the improvement of accuracy and validity in self-assessment that "learners were initially disoriented or in opposition of the process" (p. 672). The negative reactions by the students were attributed to unfamiliar roles and learners' distrust. Gordon elaborated that the curricula that successfully negotiated the transition to self-assessment norms reported noncognitive benefits such as improvements in morale, motivation and communication among learners and faculty. Cognitive improvements included increased knowledge, performance and self-analysis of performance. In Gordon's (1992, pp. 676-677) review there was no substantiation noted that most curriculums incorporating self-

assessment necessitated extraordinary resources, nor compromised traditional standards.

Hay (1995) purports that skill in self-assessment is requisite for lifelong learning, believing that regular self-assessment performance in tutorial sessions may develop this skill. However, Hays' (1995) investigation with 30 students in five tutorial groups in occupational and physical therapy in a PBL program found that the process of self-assessment merely becomes one of negotiation when the evaluation consisted of comparison of self-assessments to the tutor assessment (pp. 733-735).

Kramp and Humphreys (1992) discuss that learners need to be given more opportunities to tell of their experiences in learning to meet the process needs of self-assessment (p. 83). These narrative activities allow for reshaping, growth, and reformulation of ideas in the learning process. Students were also asked in this research to compare the experiential narratives to others. Through these comparative exercises, the learners were led to make judgments about and adjust for effectiveness of experiences in the learning process (p. 87). Westberg and Jason (1994, pp. 279-280) concur that programs fostering self-assessment in the curriculum will include clear goals, role modeling by faculty with demonstrations, provision of time and privacy needed to complete these tasks, the opportunity

for reflection with peers, and tools for self assessment. Feedback, preparation of the faculty, ensuring trust and being patient with the self-assessment process as foreign to many learners are noted precursors for enhancing self-assessment (Westberg & Jason, 1994, p. 279). Instructional strategies for fostering self-assessment, recommended by a multitude of researchers include; self-assessment forms, parallel evaluation forms, self-assessment on formal exams, journals and logs, portfolios, audio and video recordings, critical incident reports, debriefing sessions, debates, case study methods, and panel discussions (Barrows, 1994, 1996; Falchovic & Boud, 1989; Gordon, 1991, 1992; Hay, 1995; Jackson & Caffarella; 1994, Jensen & Denton, 1991; Justice & Marinau, 1988; Klevans, et al., 1992; Kramp & Humphreys, 1992; and Westberg & Jason, 1994). Faculty must be trained to learn how to offer comments and advice after students are given the opportunities for self-assessment and expression of these reflections. Learners must be prepared for the shift in responsibility, for assessing learning and even developing the criteria and goals for assessment (Barr & Tagg, 1995, pp. 12-25; Westberg & Jason, 1994, p. 280; and Wiggins, 1997).

Ertmer and Newby (1996, pp. 1-22) ascertain how less expert learners do not regulate their learning in any fashion. In

contrast, expert learners utilize four types of knowledge for success in learning:

knowledge about themselves as learners (strengths, time of day learning is best); knowledge about learning tasks (what will be required to be successful, how will this be evaluated); knowledge about a wide variety of strategies (what cognitive strategies would facilitate recall of this information, what must I do to keep my motivation high, what obstacles must be removed or sidestepped); and knowledge about content (what do I know about this topic). In addition the expert learner has the skill, will and a systematic approach to studying and learning which make strategic learning not only possible, but probable. (p. 7)

Ertmer and Newby (1996) relate these learning capacities to achievement of metacognitive control or self-regulation abilities, a step beyond and in conjunction with metacognitive knowledge. Other metacognitive regulation strategies noted were; setting goals, self-evaluating, organizing, and self-monitoring (p. 9). Effective students, reflecting on the learning process, allow for further increases in information, motivation and progression to the next phase of learning (p. 10). These processes parallel the clinical decision making process with respect to patient care in physical therapy (Norton, 1995; Rose, 1986, 1988, 1989; Sahramann, 1988).

In Gordon's (1992) review, five field studies corroborated efficacious means to enhance the accuracy and validity of self-assessment. Effective programs shared at least two common characteristics:

- (1) an expectation that learners would systematically gather and interpret data on their performances and (2)

formal requirements to reconcile learners' self-assessments with credible external evaluative sources. (p. 672)

Interestingly, Gordon (1992) did not discover a single study, in or out of the health professions that investigated the graduates trained in self-assessment, followed into the work environment, to determine the post-training transfer effects. Gordon suggests the medical residency environment as a viable option for conducting this longitudinal transfer study (p. 679).

Gordon relates that the scanty amount of research pertaining to self-assessment demands more well-designed field studies and the terminology of self-assessment demands greater conceptual clarity (p. 690).

It is notable that people learn through experience and training, with unlearning occurring simultaneously. Deliberate efforts to learn involve action, reflection and self-monitoring. Learning to learn becomes more of an awareness of self and active examination of what happens as learning occurs. Self-assessment is not a laissez faire approach to awarding the self, but being able to critically self evaluate in a systematic fashion. The heart of the learning process is developing the awareness and capacities for effective self-monitoring and active reflection (Boud, 1991; Ryan, 1993; Smith, 1991). Responses from 1842 graduates at the University of New South Wales indicated that most rated the ability to self-evaluate highly, but few believe

the university had contributed toward development of the skill (Boud, 1991, p. 2).

Writers on self-directed learning (Barrows, 1994, 1996, 1997; Ryan, 1993) argue that self-assessment skills should not be developed independently of course content. Barrows (1994, 1996) contends that these skills must be perfected through repeated, active and guided practice within the context of course or case information. Larisey (1994) describes methods for learners to become more self-aware by identifying strengths and weaknesses with plans to strengthen weaknesses and maximize strengths, utilizing the Johari window. The Johari window considers four quadrants of self-awareness; "open, known to self and others, blind, known only to others, hidden, known only to self and unknown, known neither to self nor to others" (p. 10). This is one method to enhance self-assessment.

Orest (1995) researched the clinicians' ability in physical therapy to self-assess. Utilizing four participant subjects with qualitative interviews for data gathering, themes resulted related to self-assessment. These themes; competence, patient outcome, and professional development related to the subjects' desire to improve as clinicians (p. 48-53). Orest (1995) found four prerequisite characteristics for self-assessment: "self-starting, self-directed, self-paced and self-steering" (p. 48). Interestingly, Orest noted that patient outcomes

appeared to be a driving force with self-assessment improvement for practicing clinicians (p. 52).

Jensen and Denton (1991) believe that physical therapists, ...practice in an environment where clinical problems often defy technical solutions. Creating opportunities for physical therapy students to learn the skills and attitudes required for reflective practice may be one way to better prepare students to handle the complexity of practice. (p. 33)

Self-assessment is no easy task and may be more difficult than assessing the facts (Zakharova, 1990, p. 8). Lifelong learning is an ultimate goal for curriculums employing active learning strategies and skill in self-assessment is considered requisite (Falchikov & Boud, 1989, p. 395; Hay, 1995, p. 733). Falchikov and Boud (1989) found that students in upper division courses were better skilled in self-assessment and different disciplines fared better than others. These researchers found that medical students underrated learner performance. As educators, faculty must create the time and space for self-assessment. Temporal and spatial features appear to be as important as teaching the processes of self-assessment for the reflective learner (Jackson & Caffarella, 1994, Kramp & Humphreys, 1992, p. 83). Jensen and Denton (1991) elaborated on this point in the profession of physical therapy. Novice practitioners or clinical affiliates may be caught up in mere survival in the fast-paced clinical environment, practice may be more routine than reflective (p. 37). If professionals are not educated in the skills and

practice of self-assessment in the curriculum, the reality of transference of this skill to practice is highly unlikely.

The Generic Outcome Abilities in Physical Therapy

Considering those with whom the PT graduates will work; May, Morgan, Lemke, Karst, and Stone (1995) surveyed physical therapy clinical educators from 76 clinical sites, using the Delphi technique. Physical therapy clinical educators were asked to identify generic abilities critically important to physical therapy practice. These criteria were then developed into ability-based assessments for the University of Wisconsin-Madison PT program. The impetus for this study came from academic faculty inquiring with the clinical educators about why some students fail to make the transition from didactic courses to the clinical internship. Generic abilities included, in rank order:

1. Commitment to learning: The ability to self-assess, self correct and self direct; to identify needs and sources of learning; and to continually seek new knowledge and understanding.
2. Interpersonal skills: The ability to interact effectively with patients, families, colleagues, other health care professionals and the community and to deal effectively with cultural and ethnic diversity issues.
3. Communication skills: The ability to communicate effectively (i.e., speaking body language, reading, writing, listening) for varied audiences and purposes.
4. Effective use of time and resources: The ability to obtain the maximum benefit from a minimum investment of time and resources.
5. Use of constructive feedback: The ability to identify sources of and seek out feedback and to effectively use and provide feedback for improving personal interaction.
6. Problem solving: The ability to recognize and define problems, analyze data, develop and implement solutions, and evaluate outcomes.
7. Professionalism: The ability to exhibit appropriate professional conduct and to represent the profession

effectively. 8. Responsibility: The ability to fulfill commitments and to be accountable for actions and outcomes. 9. Critical thinking: The ability to question logically; to identify, generate and evaluate elements of logical argument; to recognize and differentiate facts, illusions, assumptions and hidden assumptions; and to distinguish the relevant from the irrelevant. 10. Stress management: The ability to identify sources of stress and to develop effective coping behaviors. (p. 4)

The disadvantage, noted by May, et al. (1995) was that ability-based assessment of this nature focuses more on outcome, rather than content. However, this is the direction being demanded by the consumer and employer. These generic outcome abilities were implemented along with other criteria for the corollary assessment for portfolio projects for the NSU MPT learner (Musolino, 1997a). The portfolio project was implemented in the Fall of 1997.

Summary

Efforts to perpetuate reflective learning processes are progressing in education endeavors. These efforts to promote lifelong learning are admirable and require considerable effort to incorporate in terms of educational strategies and methodologies. Germane to facilitating these learning strategies and processes, the professor becomes more of a "guide on the side, rather than sage on the stage" (King, 1993, pp. 30-35). The dejobbing of America, according to the American Society for Training and Development, estimates 75% of the work force will require retraining and lifelong learning will be commonplace

(Twigg, 1994). In terms of considering the projections for the professions, forecasters of the American Society for Training and Development believe the employment of the future will consist of up to seven different careers, requiring new attitudes and skills.

Therefore, higher education must focus on teaching new concepts and skills as well as planning programs for lifelong learning (Twigg, 1994). Schon (1987) considers that there is a contemporary crisis between thought and action that must be fostered in professional education. The need for reflective practitioners in health care is evident and educators must, in order to be effective in addressing this need, incorporate reflection opportunities throughout professional curriculums. While capstone courses, research, case studies, and problem-based learning methodologies promote active learning with powerful forms of andragogy. Portfolios also provide one strategy for reflective thought processes to occur and facilitate lifelong learning and professional development, in the context of curriculums, and simultaneously, foster career development. Discovering the nuances of self-assessment for MPT learners may assist in improving the professional skills and abilities of physical therapists.

Qualitative Research Methodology

Qualitative research involves multiple strategies of investigation including, but not limited to, interview analysis, ethnography, conversation analysis, phenomenology, symbolic interactionism, hermeneutic inquiry, naturalistic inquiry, and grounded theory (Patton, 1991; Morse & Field, 1995). The purpose is noted by Morse and Field (1995) to "explain the social world and develop explanatory models and theories....and requires the ability for the researcher to interact skillfully with others, be persistent, focused and committed to research" (p. 1). The research is unique from quantitative explorations requiring the researcher to differentiate "another's world from one's own, yet close enough to the life of another to both experience and analyze" (p. 1). Phenomenology is classically referred to as the "study of appearances" and attributed to the logical positivist Edmund Husserl as the founder (Palmer, 1994, pp. 312-316). Morse and Field (1995) agree that phenomenology is "the method of choice when seeking to understand, make sense, and elicit the meaning of a phenomenon or human experience" (p. 208).

According to Morse and Field (1995) qualitative methods are "inductive, holistic, subjective and process-oriented research methods used to understand, interpret, describe, and develop

theory pertaining to a phenomenon or setting" (p. 242).

Palmer (1994) discusses this phenomenological activity as

describing the essence of behavior, based on meditative thought, with the purpose of promoting human understanding. both a philosophy and a method....seeking to understand the lived experiences of individuals and their intentions within their life-world....the study of phenomena and the appearance of things, and the discovery of their essence is the ultimate purpose of such research eliciting the essence of experiences. (pp. 312-316)

Patton (1991) further discusses phenomenological approaches as being the focus of understanding the meaning events have for persons being studied with several guides ranging from standardized, heavily structured interviews to open-ended formats. According to Maykut and Morehouse (1994) "the discovery of propositions by careful inspection of patterns which emerge from the data are hallmarks of phenomenology" (p. 13). As the purpose of this research is to investigate the phenomenon of self-assessment from the learners' viewpoint, or essence of the experience, a qualitative method is indicated. The semistructured interview is appropriate to ensure obtaining the information appropriate for the research questions and still providing for participant freedom to respond and illustrate concepts. According to Morse and Field (1995) these opportunities for participants to "share stories provide the rich descriptive context that make qualitative research so valuable, the analysis so interesting and significant" (p. 94).

In addition to using methods of purposive sampling to ensure participants have direct knowledge of the phenomenon under study, qualitative research varies considerably from quantitative data gathering methods. Qualitative research entails collecting and analyzing data simultaneously.

In qualitative research, data collection is a process in which the researcher learns about the research topic as the study progresses. Thus, there is a lack of standardization in data collection techniques, and these change as the study proceeds. (Morse & Field, 1995, p. 79)

Selecting the proper research methodology, quantitative or qualitative, are merely tools for facilitating research inquiry. The researcher must determine the most appropriate method or methods for investigating the research questions.

RESEARCH QUESTIONS

The purpose of addressing self-assessment needs of MPT learners is to aid learners in improvement of this process as an autonomous practitioner. In developing the self-assessment criteria for MPT students and graduates, the following questions must be answered: What are the self-assessment needs of MPT students and graduates? What is an appropriate plan to develop self-assessment for the MPT students and program graduates? To answer these questions, the following research questions are proposed:

1. What are appropriate and valid interview guide contents

to determine the self-assessment needs for MPT students and graduates?

2. What are appropriate and valid interview design to determine the self-assessment needs for MPT students and graduates?

3. What do MPT students and graduates recognize as self-assessment in their curriculum and clinical activities?

4. What barriers from peers, friends, professors, facilitators, colleagues, and others, if any, do MPT students and graduates experience in doing self-assessment?

5. What types and components of self-assessment training would be helpful for MPT students and graduates?

6. What are the essential elements to assure the incorporation of self-assessment for an MPT program or professional development course?

7. What is an appropriate plan for evaluation of the plan to incorporate self-assessment for an MPT program or professional development course?

These questions will be addressed with the data collection to address the objective: to determine the self-assessment abilities of MPT learners and a plan for implementation and evaluation to incorporate self-assessment for MPT learners.

DEFINITION OF TERMS

Adequacy. This refers to the quantity of data gleaned and whether or not the essence of the synthesis of the data reflect the population with an appropriate stage of imbueament (Morse & Field, pp. 80-81, 189).

Appropriate. This refers to the items being suitable for meeting the purpose of the interview guide questionnaire.

Appropriateness. This refers to the relevance of the data as the research participants were selected to best inform the data (Morse & Field, 1995, pp. 80-81, 189).

Clinical Instructor/Faculty. Individual at the clinical education site who directly instructs and supervises students during their clinical learning experiences. A clinical instructor is responsible for facilitating clinical learning experiences and assessing students' performance in cognitive, psychomotor and affective domains as related to entry-level clinical practice and academic and clinical performance expectations (APTA, 1995b).

Clinical Site. Practice setting in which physical therapists practice, who have agreed to act as an external educational setting for internships, a broad range of inpatient, outpatient and community settings (APTA, 1995b).

Coding. According to Morse and Field (1995) this is the "process of identifying persistent words, phrases, themes, or

concepts within the data so that the underlying patterns can be identified and analyzed" (p. 241).

Comprehending. According to Morse and Field (1995) this is "a qualitative process where the researcher is making sense of data in order to write complete, coherent, detailed and rich descriptions with respect to the data analysis" (p. 126).

Concept. According to Morse and Field (1995) this is "a phenomenon that has been identified by common recognition or by formal definition" (p. 241).

Construct. According to Morse and Field (1995) this is "a term comprising several concepts that is more encompassing and more abstract than a single concept" (p. 241).

Critical thinking. This refers to "the ability to question logically; to identify, generate, and evaluate elements of logical argument; to recognize and differentiate facts, illusions, assumptions and hidden assumptions; and to distinguish the relevant from the irrelevant" (May, Morgan, Lemke, Karst, & Stone, 1995, p. 4).

Disability. This refers to any restriction (resulting from impairment) of ability to perform an activity in the manner or within the range considered normal (Stewart & Abeln, 1993, p. 83).

Entry-level Clinician. This term refers to a new graduate from an accredited physical therapy program. An entry-level

clinician utilizes critical thinking to make independent decisions concerning patient needs and in the provision of physical therapy services. The entry-level clinician needs only occasional guidance, primarily when addressing new and complex problems (APTA, 1995b).

Functional Limitation. This refers to the loss of function best described, not by impairment, but in terms of activity restrictions or altered task performance (Stewart & Abeln, 1993, p. 83). A restriction of the ability to perform a physical action, activity or task in a typically expected, efficient or competent manner (APTA, 1995b).

Impairment. As defined by the World Health Organization, this refers to "any loss or abnormality of psychologic, physiologic, or anatomic structure or function. Impairments are disturbances at the level of an organ (e.g., defects in or loss of limb, organ or other body structure) as well as defects or loss of mental function" (Stewart & Abeln, 1993, p. 83).

Lifelong learner. This refers to students learning foundational skills that aid in the exploration of a variety of professional, and educational opportunities. These explorations encourage students to make connections among experiential and intellectual activities that can enrich a students' life and enhance understanding of the world. Becoming a lifelong learner cultivates these qualities: openness and curiosity about new

ideas; ability to discover and analyze new knowledge; conceptual understanding of the basis of many disciplines; strengthening of aesthetic values and nourishment of the life of the mind and spirit; effective writing, speaking, and critical thinking skills (Albanese & Mitchell, 1993; Dolmans & Schmidt, 1994; Schon, 1992; Shepherd & Jensen, 1994, 1997).

Objective. This is a measurable behavioral statement of an expected response or outcome; something worked toward or striven for; a statement of direction or desired achievement that guides actions and activities (APTA, 1995b).

Outcome. This refers to the result of physical therapy management expressed in terms of five areas: prevention and management of symptom manifestation, consequences of disease (impairment, disability, and/or role limitation), cost-benefit analysis, health-related quality of life and patient satisfaction. A successful outcome includes improved or maintained physical function when possible, slows functional decline where the status quo cannot be maintained and/or is considered meaningful by the patient (APTA, 1995b).

Phenomenology. According to Morse and Field (1995) the concept of phenomenology is

a philosophy and a research approach that focuses on the meaning of the "lived experience." The intention is to examine and describe phenomena as they appear in the lived experience of the individual. Thus, human experience is inductively derived and described with the purpose of discovering the essence of meaning. (p. 242)

Physical therapy. This is the care and services provided by or under the direction and supervision of a physical therapist, which includes (see Appendix A):

1) Examining patients with impairment, functional limitations, and disability or other health-related conditions in order to determine a diagnosis, prognosis, and intervention; 2) Alleviating impairments and functional limitations by designing, implementing, and modifying therapeutic interventions; 3) Preventing injury, impairments, functional limitations, and disabilities, including the promotion and maintenance of fitness, health and quality of life in all age populations; 4) Engaging in consultation, education, and research. (APTA, 1995a)

Physical therapist. This is "a licensed health professional who offers services designed to preserve, develop and restore maximum physical function" (APTA, 1995b).

Physical Therapist as primary health care provider. This is a "physical therapist who is the initial, first or principal care provider for the diagnosis and treatment of physical impairments, functional limitations and disabilities that result in movement dysfunction" (APTA, 1995b).

Portfolio. This refers to an "organized, goal driven documentation of professional growth and achieved competence in the complex act of learning. Tangible evidence of the wide range of knowledge and skills a growing professional possesses" (Campbell, Cignetti, Melenzyer, Nettles, & Wyman, 1997, p. 3).

Problem-Based Learning (PBL). This is a curriculum innovation characterized by the use of case studies as a vehicle

through which small groups of students learn problem-solving skills while simultaneously directing their own acquisition of content knowledge (Albanese & Mitchell, 1993). Upon presentation of a case, students decide how to identify major problems, gaps in their knowledge and skills, and strategies for resolving those gaps. Learning is motivated by a need to resolve problems (Barrows, 1997). Faculty tutors guide the problem solving process and skill and content acquisition, rather than teaching through lectures (Vasconez, Donnelly, Mayo, & Schwartz, 1993).

Problem solving. This refers to "the ability to recognize and define problems, analyze data, develop and implement solutions, and evaluate outcomes" (May, et al., 1995, p. 4).

Qualitative Methods. According to Morse and Field (1995) these methods are "inductive, holistic, subjective and process-oriented research methods used to understand, interpret, describe, and develop theory pertaining to a phenomenon or setting" (p. 242).

Recontextualizing. According to Morse and Field (1995) this is the "development of the emerging theory so that the theory is applicable to other settings and to other populations" (p. 129).

Reflective Practitioner (RP). According to Brookfield (1995) the concept of the Reflective Practitioner is defined as:

Rooted in the Enlightenment idea, that we can stand outside of ourselves and come to a clearer understanding of what we

do and who we are by freeing ourselves of distorted ways of reasoning and acting. There are also elements of constructivist phenomenology in the understanding that identity and experience are culturally and personally sculpted, rather than existing in some kind of objectively discoverable limbo. (p. 214)

According to Kirby and Teddlie (1989), an RP is defined as having:

...the ability to integrate research with practice in response to uncertainty and complexity that qualifies the practitioner for professional status. This theory is vital to occupations where theory is incomplete or where multiple, even conflicting theories confront the practitioner. (p. 45)

Reliability. This refers to "the measure of the extent which random variation may have influenced stability or consistency of results" (Morse & Field, 1995, p. 243).

Sample. For the purposes of this qualitative research, this refers to "the subjects required to ascertain meaning, not to measure a distribution of attributes within the population" (Morse & Field, 1995, p. 84).

Self-assessment. According to Watts (1991) this is defined as the ability to assess one's own skills, to identify one's own educational needs, to evaluate one's own progress, and to determine one's strengths and weaknesses of one's performance. Jonsen (1990) further describes the term as "not merely one who minimally qualifies, but one who seeks an ever more perfect understanding and performance of one's work" (p. 24).

Semistructured Interview. According to Morse and Field (1995) this is an open-ended questionnaire format used when the researcher is cognizant of the questions to be asked, but cannot foretell the responses (pp. 89-95). This approach ensures the researcher will gather the detail required, while providing invited subjects the autonomy to respond and explicate concepts (p. 94).

Synthesizing. This is described by Morse and Field (1995) as the "sifting" part of the analysis, and it begins when the investigator is "getting a feel" for the setting. This is the stage in which the investigator can describe the norms eloquently and have some notion about the range and variation of behaviors....reached when the researcher provides, with confidence, composite descriptions of how people act or are able to relate or respond when suffering and the ability to provide specific stories to illustrate the generalization. (p. 127-128)

Theorizing. According to Morse and Field (1995), this is the active sorting phase of analysis with systematic selection and "fitting" of alternative models to the data by constructing alternative explanations and holding these against the data until the best fit that explains the data most simply is obtained. (p. 128)

Triangulation. According to Morse and Field (1995) this is "the use of two or more methods to simultaneously or sequentially examine the same phenomenon" (p. 242).

Valid. The items were appropriate for the interview guide questionnaire to measure what the intended characteristics purported or supposed to measure for the MPT learners and

graduates (Isaac & Michael, 1995). Both content and face validity applications will be considered.

Validity. According to Morse and Field (1995) this is the extent to which the qualitative research data epitomize reality (p. 244).

METHODOLOGY AND PROCEDURES

Methodology

A qualitative development methodology using semi-structured interviews will be used to address the project's objective: to develop and validate the self-assessment criteria and a plan for implementation and evaluation, based on this, to incorporate self-assessment for Master's in Physical Therapy (MPT) learners, including students and graduates. The plan for implementation and evaluation will be the product resulting from the project and will be included in the appendix of the final report.

The development of the plan has been endorsed by the Acting Director of NSU PT, and it is anticipated that this plan will result in the implementation of more formalized self-assessment for MPT learners (see Appendix D). The conceptual framework for this project is based on a number of Nova Southeastern University activities including seminars, practicums, and summer institute work, as well as the adoption of the Clinical Performance Instrument (CPI).

Procedures

Several procedures are planned as part of this study. Procedures can be categorized into three major activities: interview guide instrument development, data gathering through semi-structured interviews, and plan development for implementation and evaluation of the project. Instrument development will be comprised of eight steps. Data Gathering will be comprised of seven steps. Plan development for implementation and evaluation will be comprised of five steps. The following is a detailed description of each step.

Interview Guide - Instrument Development

To initiate the formulation of an interview guide step one will be to review the literature and the APTA (see Appendix A) and NSU PT (see Appendix B) program mission and philosophy statements. The literature review will include topics of: (a) reflective practice and theory; (b) curriculum activities that foster reflection, including an overview of problem-based learning (PBL); (c) self-assessment and practice issues; (d) the generic outcome abilities in physical therapy; and (e) qualitative research methodologies.

Step two will be to seek appropriate permission from Marianne Orest (1995) for the purposes of including the self-assessment guide in the interview instrument (see Appendix E).

This guide was used for a study pertaining to physical therapy clinicians.

Step three will be to select and gather an internal formative committee based on expertise and interest in self-assessment in the health professions, to validate the interview guide instrument. The formative committee will consist of:

1. One faculty representative of the NSU MPT program
2. One student in the NSU MPT program
3. One clinical affiliate in the NSU MPT program
4. One entry-level graduate of the NSU MPT program
5. One faculty representative of the NSU Occupational Therapy program

The formative committee input, along with the review of the literature, will serve to formulate and validate the interview guide instrument (see Appendix F).

Step four, for development of the instrument, following Institutional Review Board (IRB) approval, the proposal and IRB support documents will be submitted to the IRB committee for approval to conduct the project.

Step five of the instrument development will be to seek initial feedback from the formative committee in response to a preliminary draft of the questionnaire with the use of open-ended questions concerning the content and design of the instrument (see Appendix F). The questionnaire will be distributed by mail,

to the formative committee, with a two-week response deadline for return of the questionnaire.

Step six of the project will be based upon input from the literature review, mission and philosophy statements, and input from the formative committee gathered through the questionnaire this feedback information will serve as the foundation for the construction of the interview guide instrument. The necessary revisions to the interview guide instrument based upon the input will be completed.

Step seven will consist of compiling all of the formative committee responses in the results section. Finally, step eight, for development of the instrument, following IRB approval, pending no substantive changes in the questionnaire, the interview instrument guide will be pilot tested with an MPT learner. The purpose of the pilot will be to test the equipment used for the data gathering, and analyze the flow of the procedures.

Data Gathering

Step one of data gathering, following pilot testing of the instrument, will be to triangulate findings with the literature and persons with expertise in qualitative interviewing techniques. This process will aid in identifying the interviewer's ability to gather interview data and identify codes and themes.

Step two will consist of identifying approximately three to five MPT learners as subjects from which to gather interview data. These subjects will be gathered from a sample of convenience pool of MPT learners recommended by faculty as representative of students with some self-assessment abilities. Faculty will not be obligated to recommend learners, but merely identify those who would be representative of MPT learners with self-assessment abilities based upon the operational definition (Jonsen, 1990, p. 24; Watts, 1991). This will be determined by means of professional judgement of the faculty through former and current student interactions with mentees and based upon the operational definition of self-assessment. This process will provide for purposeful sample and appropriateness of participants (Morse & Field, 1995, p. 80).

The precise number of subjects can only be approximated at this juncture of the proposal phase, secondary to the inability to predict the exact number of subjects necessary to formulate consistent codes and themes from emergent data (Morse & Field, 1995, pp. 51-52). The sample will be determined as adequate to obtain comprehensive descriptors, but additional participants will be added until the researcher is satisfied that the data are complete. According to Morse and Field (1995) "the sample will serve to discover meaning, not to measure the distribution of attributes within a population" (p. 84). Emphasis will be based

upon the depth of information and knowledge and the experiences of the subjects rather than the breadth of data. The sample will be determined as adequate when available data provides a rich and full (Morse & Field, 1995, p. 80) description of the phenomenon of self-assessment, preferably that the stage of saturation has been reached. Saturation refers to the fact that no new data will emerge by conducting further interviews. Hence, the qualitative data will meet the principles of sampling of appropriateness and adequacy (Morse & Field, 1995, pp. 80-81).

Step three of data gathering will consist of the actual administering of the semistructured interviews, using the interview guide questionnaire (see Appendix F). These interviews will last approximately 40 minutes in length and will be audio recorded following receipt of informed consent from the subject using an appropriate form (see Appendix G). The interviews will occur on different dates not spanning more than a one month time frame.

Step four will consist of transcription of the audiotaped interviews. The data will appear in text format, transcribed verbatim, with identification code numbers for each line of text in the left margins. Interviewees will then be sent a copy of the transcription for verification signature and the opportunity for clarification. This verification process will serve to

validate the subjects' data responses (Morse & Field, 1995, pp. 142-146, 244).

Step five of data gathering will consist of examining the transcribed data utilizing the following four active cognitive processes for data analysis: (a) comprehending, (b) synthesizing (decontextualizing), (c) theorizing, and (d) recontextualizing (Morse & Field, 1995, p. 126).

Step six of data gathering will be the actual analysis of the data using thematic, semantic, and content analysis (Morse & Field, 1995, p. 134). Following coding of the data for categories and themes, tentative propositions about relationships of data will be developed. An appropriate audit trail will be conducted throughout the data analysis process (Morse & Field, 1995, p. 143-147). Data collection will be completed when meeting the criteria of appropriateness and adequacy (p. 80).

Step seven will consist of presenting the data using appropriate samples to illustrate codes, themes, and conceptual findings. Appropriate triangulation will also be completed with other researchers to assist in reexamining the phenomenon of self-assessment. Data will be presented in an anonymous fashion and MPT learner subjects will be identified by letter only, for example: *Subject A*.

Plan for Development and Evaluation

After the data gathering phase has been completed, the plan development phase will be undertaken. Collins (1993) proposes following certain steps when developing plans. The procedures outlined for this plan are adapted from this list:

1. Review data gathered
2. List pertinent trends and issues
3. Determine possible options with goals and objectives for types and components of self-assessment training within the curriculum with a plan for evaluation
4. Validate the plan for implementation and evaluation with summative committee review using a Likert-scale instrument for content and design considerations (see Appendix 'H'). The plan for evaluation will consist of appropriate time lines and a blueprint to determine the effectiveness of the incorporation of self-assessment for MPT learners.

The summative committee will be comprised of:

1. One faculty member from Alverno College Nursing Program
2. One Director of Education of the APTA
3. One Director of Education of the Southern Illinois University School of Medicine PBL curriculum
4. One faculty member of McMaster's University PT PBL Program

The data collection instrument will be mailed with a two-week turn around for return of completed surveys. If at least two of the four summative committee members judge below a 3.0 on any item of the validation instrument, (Likert scale ratings from 1, representative of strongly disagree to 5 strongly agree) the item will be reviewed and possibly revised. If there is a mean rating of 4.0 on each item of the content and validation instrument, the plan will be validated. Finally, the validated plan will be submitted to the Acting Director of the PT program for recommendation for implementation and APTA Section for Education.

ASSUMPTIONS

There will be several assumptions made about this study. First, it is assumed that the literature review will be thorough and valid. Second, it is assumed that the study will be valid for NSU PT and MPT learners. Third, an assumption is made that the expert panel evaluation of the content and format of the project will be reliable and valid.

Fourth, there will be an assumption that the experts will be able to perform the task accurately and guide the development process. Fifth, it will be assumed that the results of the study will be valid for NSU PT program and MPT learners from an environmental perspective. Sixth, it will also be assumed that

appropriateness and adequacy will be achieved in this qualitative data gathering methodology.

Seventh, it will be assumed that the MPT learners completing the semistructured interviews will consider the information carefully and make reasonable contributions. Eighth, the formative and summative committee members will be assumed to be experts and qualified to make judgments that relate to self-assessment in the profession of physical therapy because of their positions, educational backgrounds, and experiences in the health care professions. Finally, it will be assumed that responses to the instruments and methodologies used to gather data will be truthful.

LIMITATIONS OF THE STUDY

Several important limitations are noted. First, there may be errors or bias in the responses or sampling, and some subjects may not respond fully to the interview. Second, it may be that the construction of the interview guide and questionnaires may be faulty.

Third, the profession of physical therapy is undergoing rapid change in today's health care professions; therefore, the instruments may become dated before the study can be completed. Fourth, the product will be limited in that it is specific to the needs of MPT learners. Fifth, the product evaluation may not be

generalizable to the NSU PT Program or other PT programs due to unique environments.

Sixth, the project is limited in that health care employers' needs frequently change in today's environment and maintaining currency in these professions from a future employee standpoint is difficult. Seventh, the success of the implementation of the plan will be dependent upon the willingness of the institution, faculty, and MPT learners to adapt and participate with respect to current workloads, time to devote to the plan, and resources to support the process. This limitation is enhanced by institutional societal factors, such as funding, time, qualified professional faculty, and resources for training, with respect to implementation of the plan.

IMPLICATIONS FOR THE IMPROVEMENT OF EDUCATIONAL PRACTICE

This qualitative methodology will provide unique insight into the MPT program students' and graduates' concept of self-assessment. This plan would help to promote self-assessment activities for the MPT students and program graduates, as a result of identifying and describing the self-assessment needs of these learners. This development project, if implemented, would help the university in its mission to provide reflective practitioners with life-long learning capabilities in the profession of physical therapy, in order to serve their future patients.

In addition to the benefits to NSU MPT program and the future health care providers, faculty would be provided with a plan to incorporate self-assessment activities into the curriculum. In addition, the plan could be replicated by other PT programs with recommendations to the APTA, providing a valuable contribution to the advancement of the PT profession, in terms of blending the artistry of practice with the science of health care.

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APPENDIXES

Appendix A
American Physical Therapy Association &
 Commission on Accreditation of Physical Therapist
 Education Statements

American Physical Therapy Association

Definition of Physical Therapy:

Physical therapy, which is the care and services provided by or under the direction and supervision of a physical therapist, includes: 1) examining and evaluating patients with health-related conditions, impairments, functional limitations, and disability in order to determine a diagnosis, prognosis, and intervention; 2) alleviating impairments and functional limitations by designing, implementing, and modifying therapeutic interventions; 3) preventing injury, impairments, functional limitations, and disability, including promoting and maintaining fitness, health, and quality of life in all age populations; and 4) engaging in consultation, education, and research. (Adopted by the American Physical Therapy Association (APTA) Board of Directors in March 1995 (BOD 03-95-24-64)).

Curriculum Components & Practice Expectations (excerpt)

1.0 SECTION 1: ORGANIZATION

Preamble

Physical therapists must work within the structures of their practice and of legal, social, and ethical environments; similarly, physical therapist education programs must function within the structure of the institutions in which they exist. Physical therapist education programs must be vital parts of the institutions in which they are located, and the existence of programs must be consistent with institutional missions and resources. Institutions that offer physical therapist education programs must do so because of their commitment to humanistic principles, scientific inquiry, and service to society. They must exhibit sensitivity to the role of health professions in society. Physical therapist education programs must be integral to institutional missions and be logical extensions of the institution's education and service programs.

Institutions must be committed to professional education and demonstrate awareness of the differences between professional education and traditional degree programs. Among the differences are the following: professional education requires the student to engage the entire body of knowledge related to the profession and to demonstrate accountability for the utilization of that knowledge; professional education is structured and focused on the knowledge and skills necessary for initial practice of the profession; emphasis is placed on socialization of the student into the profession, including the behavioral and ethical

standards to be met; and, faculty are expected to serve as exemplary professional role models.

Through the structure and function of the institution, graduates must be made aware of their need to build on their liberal education, to incorporate the concepts of responsible citizenship into their professional lives, to interact with other professionals, to continue their education throughout their professional careers, and to be ethical and scientifically current in order to be responsible health care practitioners. Innovation and variations from traditional approaches to professional education are institutional prerogatives that are respected and encouraged when evidence is provided that they are effective and beneficial.

3.0 SECTION 3: CURRICULUM DEVELOPMENT AND CONTENT

Preamble

A curriculum is a plan for learning, designed by the program faculty in consultation with practitioners and members of communities of interest, to achieve explicit educational goals and objectives for preparation of a physical therapist. In addition to preparing practitioners, one goal of physical therapy education is to build on the liberal education of the student by incorporating the concepts of responsible citizenship into the professional curriculum. The curriculum sets forth the knowledge, skills, attitudes, and values needed to achieve these goals.

The professional program is built on a foundation of liberal arts, and social and basic sciences. Course work within the professional curriculum includes a balance of foundational and clinical sciences; critical inquiry; clinical practice; and studies of society, health care delivery, and physical therapy practice. The educational philosophy and values of the institution, the program, and the individuals who teach in it and the knowledge of and beliefs about learning are central aspects of the curriculum.

The educational outcomes are entry-level and are based on practice expectations that are congruent with and reflect current physical therapy practice, emerging trends in health care delivery, and advances in physical therapy theory and technology.

3.1. Core faculty assume primary responsibility for curriculum development with input from all program faculty as well as from students enrolled in the program.

3.8.3. learning experiences designed to achieve educational outcomes required for initial practice of the profession of physical therapy.

Communication

3.8.3.1. Expressively and receptively communicate with all individuals when engaged in physical therapy practice, research, and education, including patients, clients, families, care

givers, practitioners, consumers, payers, and policy makers.
Individual and Cultural Differences

3.8.3.2. Incorporate an understanding of the implications of individual and cultural differences when engaged in physical therapy practice, research, and education.

Professional Behavior

3.8.3.3. Demonstrate professional behaviors in all interactions with patients, clients, families, care givers, other health care providers, students, other consumers, and payers.

3.8.3.4. Adhere to legal practice standards, including all federal, state, jurisdiction, and institutional regulations related to patient or client care, and to fiscal management.

3.8.3.5. Practice ethical decision making that is consistent with applicable professional codes of ethics, including the APTA's Code of Ethics.

3.8.3.6. Participate in peer assessment activities.

3.8.3.7. Participate in clinical education activities.

Critical Inquiry and Clinical Decision-making

3.8.3.8. Participate in the design and implementation of decision-making guidelines.

3.8.3.9. Demonstrate clinical decision-making skills, including clinical reasoning, clinical judgment, and reflective practice.

3.8.3.10. Evaluate published studies related to physical therapy practice, research, and education.

3.8.3.11. Secure and critically evaluate information related to new and established techniques and technology, legislation, policy, and environments related to patient or client care.

3.8.3.12. Participate in scholarly activities to contribute to the body of physical therapy knowledge (e.g. case reports, collaborative research).

Education

3.8.3.13. Educate others using a variety of teaching methods that are commensurate with the needs and unique characteristics of the learner.

Professional Development

3.8.3.14. Formulate and implement a plan for personal and professional career development based on self-assessment and feedback from others.

Screening

3.8.3.15. Determine the need for further examination or consultation by a physical therapist or for referral to another health care professional.

Examination

3.8.3.16. Independently examine and re-examine a patient or client by obtaining a pertinent history from the patient or client and from other relevant sources, by performing relevant systems review, and by selecting appropriate age-related tests and measures. Tests and measures (listed alphabetically) include,

but are not limited to, the following:

a) aerobic capacity and endurance; b) anthropometric characteristics; c) arousal, mentation, and cognition; d) assistive and adaptive devices; e) community and work reintegration; f) cranial nerve integrity; g) environmental, home, and work barriers; h) ergonomics and body mechanics; i) gait, assisted locomotion, and balance; j) integumentary integrity; k) joint integrity and mobility; l) motor function; m) muscle performance (including strength, power, and endurance); n) neuromotor development and sensory integration; o) orthotic, protective, and supportive devices; p) pain; q) posture
r) prosthetic requirements; s) range of motion (including muscle length); t) reflex integrity; u) self care and home management (including activities of daily living and instrumental activities of daily living); v) sensory integrity (including proprioception and kinesthesia); w) ventilation, respiration, and circulation

Evaluation

3.8.3.17. Synthesize examination data to complete the physical therapy evaluation.

Diagnosis

3.8.3.18. Engage in the diagnostic process in an efficient manner consistent with the policies and procedures of the practice setting.

3.8.3.19. Engage in the diagnostic process to establish differential diagnoses for patients across the lifespan based on evaluation of results of examinations and medical and psychosocial information.

3.8.3.20. Take responsibility for communication or discussion of diagnoses or clinical impressions with other practitioners.

Prognosis

3.8.3.21. Determine patient or client prognoses based on evaluation of results of examinations and medical and psychosocial information.

Plan of Care

3.8.3.22 Collaborate with patients, clients, family members, payers, other professionals, and individuals to determine a realistic and acceptable plan of care.

3.8.3.23. Establish goals and functional outcomes that specify expected time duration.

3.8.3.24. Define achievable patient or client outcomes within available resources.

3.8.3.25. Deliver and manage a plan of care that complies with administrative policies and procedures of the practice environment.

3.8.3.26. Monitor and adjust the plan of care in response to patient or client status.

Intervention

3.8.3.27. Practice in a safe setting and manner to minimize risk

to the patient, client, physical therapist, and others.

3.8.3.28. Provide direct physical therapy intervention, including delegation to support personnel when appropriate, to achieve patient or client outcomes based on the examination and on the impairment, functional limitations, and disability. Interventions (listed alphabetically) include, but are not limited to:

a) airway clearance techniques; b) debridement and wound care
c) electrotherapeutic modalities; d) functional training in community and work (job, school or play) reintegration (including instrumental activities of daily living, work hardening, and work conditioning); e) functional training in self care and home management (including activities of daily living and instrumental activities of daily living); f) manual therapy techniques; g) patient-related instruction; h) physical agents and mechanical modalities; i) prescription, application, and as appropriate fabrication of adaptive, assistive, orthotic, protective and supportive devices and equipment; j) therapeutic exercise (including aerobic conditioning)

3.8.3.29. Provide patient-related instruction to achieve patient outcomes based on impairment, functional limitations, disability and patient satisfaction.

3.8.3.30. Complete thorough, accurate, analytically sound, concise, timely, and legible documentation that follows guidelines and specific documentation formats required by the practice setting.

3.8.3.31. Take appropriate action in an emergency in any practice setting.

Outcomes Measurement and Evaluation

3.8.3.32. Implement an evaluation of individual or collective outcomes of patients or clients.

Prevention and Wellness

3.8.3.33. Identify and assess the health needs of individuals, groups, and communities, including screening, prevention, and wellness programs that are appropriate to physical therapy.

3.8.3.34. Promote optimal health by providing information on wellness, disease, impairment, functional limitations, disability, and health risks related to age, gender, culture, and lifestyle.

Management in Various Care Delivery Systems

3.8.3.35. Provide primary care to patients with neuromusculoskeletal disorders within the scope of physical therapy practice through collaboration with other members of primary care teams based on patient or client goals and expected functional outcomes and on knowledge of one's own and other's capabilities.

3.8.3.36. Provide care to patients referred by other practitioners, independently or in collaboration with other team members, based on patient or client goals and expected functional

outcomes and on knowledge of one's own and other's capabilities.
 3.8.3.37. Provide care to patients, in collaboration with other practitioners, in settings supportive of comprehensive and complex services based on patient or client goals and expected functional outcomes and on knowledge of one's own and other's capabilities.

3.8.3.38. Assume responsibility for the management of care based on the patient's or client's goals and expected functional outcomes and on knowledge of one's own and other's capabilities.

3.8.3.39. Manage human and material resources and services to provide high-quality, efficient physical therapy services based on the plan of care.

3.8.3.40. Interact with patients, clients, family members, other health care providers, and community-based organizations for the purpose of coordinating activities to facilitate efficient and effective patient or client care.

Administration

3.8.3.41. Delegate physical-therapy-related services to appropriate human resources.

3.8.3.42. Supervise and manage support personnel to whom tasks have been delegated.

3.8.3.43. Participate in management planning as required by the practice setting.

3.8.3.44. Participate in budgeting, billing, and reimbursement activities as required by the practice setting.

3.8.3.45. Participate in the implementation of an established marketing plan and related public relations activities as required by the practice setting.

Consultation

3.8.3.46. Provide consultation to individuals, businesses, schools, government agencies, or other organizations.

Social Responsibility

3.8.3.47. Become involved in professional organizations and activities through membership and service.

3.8.3.48. Display professional behaviors as evidenced by the use of time and effort to meet patient or client needs or by providing pro bono services.

3.8.3.49. Demonstrate social responsibility, citizenship, and advocacy, including participation in community and human service organizations and activities.

The curriculum includes content and learning experiences designed to prepare students to exhibit the above practice expectations upon graduation from the program. The expected student outcomes include those sets of knowledge and skills which the graduates are prepared to demonstrate upon successful completion of the required academic and clinical portions of the education program.

Commission on Accreditation of Physical Therapist Education
Section 4: Performance of Program Graduates

Performance of program graduates is expressed as statements of the roles and responsibilities of the physical therapist in the care of patients, education of practitioners and the public, and research and scholarly activity relevant to the advancement of physical therapy as an art and science.

Performances are described in three categories: patient care, the physical therapy delivery system; and the health care system and society. The program graduates recognize how social, economic, legislative and demographic factors influence the delivery of health care in the United States.

In judging compliance with the following evaluative criteria, the Commission on Accreditation in Physical Therapy Education and the On-site evaluators will seek evidence about the performance of program graduates. Evidence which supports compliance may include surveys of program graduates, surveys of clinical faculty and information solicited from employers and patients/clients of program graduates.

4.1. Patient Care

4.1.1 The program graduates practice in an ethical, legal, safe, caring and effective manner which is demonstrated by practicing with a knowledge of:

- 4.1.1.1. the scientific basis and effectiveness of physical therapy evaluation, prevention, and treatment procedures;
- 4.1.1.2. standards of practice
- 4.1.1.3. applicable state and federal laws;
- 4.1.1.4. ethical principles;
- 4.1.1.5. the scope of their abilities in the delivery of care;
- 4.1.1.6. their responsibility to refer to other physical therapists and members of the health care team when indicated.

4.1.2. The program graduates are able to screen individual to determine the need for physical therapy examination of for referral to other health professionals by:

- 4.1.2.1. identifying potential health problems;
- 4.1.2.2. recognizing patient problems that may require other professional attention in addition to that from a physical therapist.

4.1.3. The program graduates determine in any patient with physical dysfunction a diagnosis that is within the scope of physical therapy by:

- 4.1.3.1. obtaining pertinent history and

- identifying patient problems through interview or other appropriate methods;
- 4.1.3.2. selecting and performing appropriate examinations and interpreting the results of physical therapy examinations of the neurological, musculoskeletal, cardiovascular, pulmonary, integumentary, and other systems as appropriate.
- 4.1.4. The program graduates design a comprehensive physical therapy plan of care that includes:
 - 4.1.4.1. realistic measurable physical therapy goals and length of achievement;
 - 4.1.4.2. therapeutic procedures that have the potential for achieving the goals;
 - 4.1.4.3. recognition of the influence of biological, psychological, cognitive, social and cultural factors on compliance and the achievement of goals;
 - 4.1.4.4. concepts of health maintenance and promotion and prevention of disease and disability;
 - 4.1.4.5. collaboration with patients, families, those individuals responsible for the patient and colleagues.
 - 4.1.4.6. re-evaluation and modification of the plan, treatment and goals.
- 4.1.5. The program graduates manage a physical therapy plan of care by:
 - 4.1.5.1. implementing a comprehensive treatment plan.
 - 4.1.5.2. interacting with patients and families in a manner which provides the desired psychosocial support;
 - 4.1.5.3. appropriately delegating to and directing the physical therapist assistant and supervising other support personnel;
 - 4.1.5.4. participating in discharge planning and follow-up care including referral to other community resources as indicated;
 - 4.1.5.5. documenting relevant aspects of history, examination, assessment, planning and treatment;
 - 4.1.5.6. demonstrating effective written, oral and nonverbal communication with patients and their families, colleagues,

- other health providers and the public;
- 4.1.5.7. promoting effective interpersonal relationships in all aspects of professional practice.

4.2. Physical Therapy Delivery System

In each case, it is important that program graduates recognize the influence of social, economic, legislative and demographic factors on the delivery of health care. The successful graduate interacts with other health care professionals in ways that reflect the willingness to add new information to the system and effectively represent one's role and responsibility. The program graduates are knowledgeable of the fiscal management of physical therapy services.

The program graduates are able to:

- 4.2.1. apply concepts and principles of management in the provision of physical therapy to individuals, organizations, and communities;
 - 4.2.2. apply concepts of teaching and learning theories in designing, implementing and evaluating learning experiences used in the education of patients, students, colleagues and the community;
 - 4.2.3. apply basic principles of the scientific method to read and interpret professional literature, to participate in clinical research activities, and to critically analyze new concepts and findings;
 - 4.2.4. design and implement cost effective physical therapy services;
 - 4.2.5. plan and implement programs designed to promote and maintain health and wellness;
 - 4.2.6. use current information management technologies in the delivery of physical therapy services and analysis of data when indicated;
 - 4.2.7. demonstrate effective professional writing skills;
 - 4.2.8. assess treatment and service outcomes;
 - 4.2.9. participate in quality assurance programs;
 - 4.2.10. plan for future professional development to maintain a level of practice consistent with acceptable standards.
- 4.3. The Health Care System and Society
- The program graduates are able to:
- 4.3.1. recognize the need for demonstrating accountability, cost effectiveness of

- 4.3.2. services provided, and efficacy of services;
participate in developing methods to meet the
physical therapy needs of society;
- 4.3.3. serve as consultants to individuals,
colleagues in physical therapy, other health
professionals, organizations and the
community.

Appendix B

Nova Southeastern University Mission and Philosophy StatementsNova Southeastern University Mission Statement

Nova Southeastern University is a dynamic, not-for-profit independent institution dedicated to providing high quality educational programs of distinction from pre-school through the professional and doctoral levels, as well as service to the community. Nova Southeastern University prepares students for lifelong learning and leadership roles in business and the professions. It offers academic programs at times convenient to students, employing innovative delivery systems and rich learning resources on campus and at distant sites. The University fosters inquiry, research, and creative professional activity, by uniting faculty and students in acquiring and applying knowledge in clinical, community, and professional settings.

Approved by the Board of Trustees March 24, 1997

NSU Health Professions Division Mission Statement

The mission of the Health Professions Division is to train primary care health practitioners in a multi disciplinary setting, especially for under served areas.

NSU Physical Therapy Program Mission Statement

The mission of the NSU Physical Therapy Program is to prepare physical therapists as primary health care providers. Operational definition: Physical therapist as primary health care provider: a physical therapist who is the initial, first or principal care provider for the diagnosis and treatment of physical impairments, functional limitations and disabilities that result in movement dysfunction.

NSU Physical Therapy Program Philosophy

We believe the physical therapist--diagnoses, plans, treat and supervises care for physical impairments and disabilities that are the result of dysfunction of any body system, must be prepared to consider the influence of mind, body and spirit on health in order to prevent dysfunction and promote wellness, must anticipate the need for change in the profession and health care delivery, must contribute to the body of knowledge of physical therapy and be supportive of the collegial search for truth.

We believe the physical therapy profession--is committed to access to health care for all people, is essential to primary health care in order to meet the needs of the undeserved across their life spans in all strata of society, is dynamic and responsive to the health care demands of current society.

We believe that physical therapy education--demands a strong liberal arts foundation, including foreign language, to prepare physical therapists for leadership roles in a multi-cultural society, occurs best in a creative atmosphere that fosters exchange among faculty, students, and practitioners, who are all self-directed and able to function independently and in groups, occurs best when the roles of academic and clinical faculty are intertwined because they are equally vital to the learning process.

We believe that physical therapy faculty--must bring together a variety of academic, clinical, and life experiences which complement each other and are necessary to provide the depth and breadth of learning opportunities essential to the education of the generalist physical therapist or primary care practice.

We believe that physical therapy graduates--must be committed to serve the profession and society through contributions to the advancement of the profession in their search for new knowledge and skills as life-long learners and applied scientists, must be committed to serve the profession and society in a variety of roles such as primary care providers, consultants, advocates for the disabled and change agents.

NSU Physical Therapy Program Outcomes

Graduates will be able to--practice with integrity as generalists in primary health care in order to serve diverse populations of any age and cultural, socioeconomic, and educational status, participate in activities that insure personal and professional growth, communicate appropriately with any audience, practice ethically and legally in any health care setting, advocate for the disabled, serve as change agents in organizations, including legislative bodies, apply the principals of management and consultation in any practice setting to assure efficient and effective health care, participate in the development of knowledge that advances the profession, teach in any role, and choose actions that reflect consideration for the consequences of their decisions.



Memorandum

Appendix C

COLLEGE OF ALLIED HEALTH

Clinical Performance Instrument with Permission to Include

From: Gina Musolino, ABD, MSEd, PT

Date: April 2, 1998

Re: Permission to Reproduce the Clinical Performance Instrument

Per our telephone conversation on this date, I have been in contact with Jody Gandy, PhD, PT

regarding permission to reproduce the CPI for the purposes of my Appendix in my dissertation study and am contacting you in order to obtain appropriate authorization. Nova Southeastern University is licensed for use of the CPI. This permission will aid in the conceptual purpose of my study needs to confirm that MPT learners need to be able to self-assess.

Thank you for your assistance. The title of my doctoral dissertation is: Sitting Beside Oneself: Development and Validation of a Plan for Self-Assessment for MPT Learners

Please send the authorization letter to:

Ms. Gina Musolino, ABD, MSEd, PT

10931 NW 9th Court

Pt. Lauderdale, FL 33328-7337

FAX also to: (954) 262 - 1783

APTA, 1111 N Fairfax St, Alexandria, VA 22314-1488

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With appreciation,

K. Quantrille 4/8/98
Karin Quantrille
Director of Publications

Date

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BEST COPY AVAILABLE

INSTRUCTIONS FOR USING THE PHYSICAL THERAPIST CLINICAL PERFORMANCE INSTRUMENT

INTRODUCTION

A physical therapist (PT) student assessment system evaluates knowledge, skills, and attitudes and incorporates multiple sources of information to make decisions about readiness to practice. Sources of information may include clinical performance evaluations of students, classroom performance evaluations, students' self-assessments, peer assessments, and patient assessments. The system is intended to enable clinical educators and academic faculty to obtain a comprehensive perspective of students' progress through the curriculum and competence to practice at entry-level. The uniform adoption of this instrument will ensure that all practitioners entering practice have demonstrated a core set of clinical attributes.

A clinical performance instrument is a central component of the assessment system and is used by the academic institution to ensure students' readiness for practice. This instrument has undergone pilot and field studies and is designed to evaluate student clinical performance in relation to entry-level competence (see *Tab—Studies Investigating the Physical Therapist Clinical Performance Instrument*). It is applicable to a broad range of clinical settings and throughout the continuum of clinical learning experiences. Every performance criterion in this instrument is important to the overall assessment of clinical competence, and most criteria are observable in every clinical experience. It is strongly recommended that all criteria be rated whenever possible. If this instrument is altered for use in such situations, it is in violation of copyright.

COMPONENTS OF THE FORM

There are 24 performance criteria, with visual analog scales (VASs) for each criterion. Sample behaviors are included in shaded boxes for each criterion. Space for comments is provided, as well as boxes to indicate when performance is "of significant concerns," "with distinction," or "not observed."

- | | |
|--|--|
| Superscript "g" | A superscript "g" after a word indicates that the word is defined in the glossary. |
| Performance Criteria | Items numbered 1-24 define performance areas to be evaluated. In the aggregate, these items describe all essential aspects of professional practice of a PT clinician performing at entry-level. |
| Red Flag Item
 | A flag () to the left of a performance criterion indicates a "red-flag" item. The five "red-flag" items (numbered 1-5) are considered foundational elements in clinical practice. Difficulty with a performance criterion that is a red-flag item warrants immediate attention and a telephone call to the ACCE, and may include remediation and/or dismissal from the clinical experience. |
| Visual Analog Scale: | Individual competencies in the CPI are evaluated using a VAS. This provides a convenient way to indicate a student's level of performance, ranging from "novice clinical performance" to "entry-level performance." Placement of a mark on the line indicates the student's current level of performance on a particular competency relative to entry-level performance. |

The continuous nature of the rating matches the continuous nature of the student's educational experience and skill development. The VAS provides maximum sensitivity to fine gradations (0 to 100-mm line) in performance that might be missed by a cruder numerical rating scale (e.g., five-point scale). This is particularly important for the evaluation of individual students. The lack of rating numbers or other labels also avoids the inherent "grade" values that often accompany use of scale points and instead emphasizes the distance from the entry-level criterion.

Sample Behaviors

The sample of commonly observed behaviors (denoted with lower-case letters in shaded boxes) for each criterion may be used to guide assessment of students' competence relative to the performance criteria. Given the uniqueness and complexity of clinical practice, the behaviors provided are not meant to be an exhaustive list. There may be additional or alternative behaviors relevant and critical to a given clinical setting. Consequently, all listed behaviors need not be present to rate students at entry-level on the VAS. Sample behaviors are not listed in order of priority, but most behaviors are presented in logical order.

Significant Concerns Box

Checking this box indicates that the student's performance on this criterion is unacceptable and places the student at risk of failing this clinical experience. When the Significant Concerns Box is checked, written comments are required and a phone call () is placed to the ACCE. A box is provided for midterm and final assessments.

With Distinction Box

Checking this box indicates that the student's performance on this criterion exceeds expectations for the clinical experience. Record in the appropriate Midterm (M) and/or Final (F) box.

Not Observed Box

Checking this box indicates that the student's performance on this criterion was not observed. Record in the appropriate Midterm (M) and/or Final (F) box. The Not Observed Box rarely should be used. If you are considering marking this box relative to a specific criterion, please carefully review the sample behaviors located in the shaded box for that criterion.

Comments

Narrative comments should be provided by the clinical instructor² (CI) to elaborate on or clarify students' performance ratings. Comments are encouraged for each performance criterion. These comments may include critical incidents, problem or deficit areas, and/or exemplary areas of performance. Comments are required when the Significant Concerns Box has been checked, when a student's performance is below entry-level at the end of the final clinical experience, and for deficiencies in psychomotor skills. Comments are also required when the "with distinction" box is checked.

Summative Comments

The summative comments section provides a mechanism for the clinical instructor to identify, clarify, and highlight students' overall performance as related to their areas of strength, areas needing improvement, and other relevant comments during midterm and final evaluations. These comments should be based on the student's performance relative to objectives for the clinical experience. For intermediate clinical experiences, a student rated below entry-level on the VAS may, in fact, meet or exceed objectives for that experience.

USING THE FORM

Proper use of the CPI requires not only knowledge of all its components, but consideration of how to record your observations and interpretations of the students performance. Appendix A provides three examples of how one performance criterion might be evaluated at midterm and final evaluations.

Clinical Instructor

The CI(s) will assess a student's performance and complete the instrument at midterm and final evaluation periods. Sources of information may include, but are not limited to, CIs, other PTs, PTAs, other professionals, patients, and students. Methods of data collection may include direct observation, videotapes, documentation review, role playing, interviews, standardized practical activities, portfolios, journals, computer-generated tests, and patient and outcome surveys. Clinical educators should feel free to use multiple sources and methods to assess student clinical performance. The CI reviews the completed instrument formally with the student at midterm evaluation and at the end of the clinical experience and signs the signature page (27) following each evaluation.

Student

Student(s) assess their own performance on a separate copy of the instrument. The student reviews the completed form with the CI at midterm evaluation and at the end of the clinical experience and signs the signature page (27) following each evaluation.

Recording Performance Rating

The same VAS is used for midterm and final evaluations. One vertical line is placed on the VAS at the appropriate point indicating the midterm evaluation rating, and one vertical line is placed on the VAS at the appropriate point indicating the final evaluation rating. Label the midterm evaluation line with an "M" above the line, and label the final evaluation line with an "F" above the line. Once the form is complete, there will be two vertical lines on the VAS, one for the midterm evaluation rating and one for the final evaluation rating (*see Appendix A—Examples*). A new CPI will be used for each clinical experience.

Marking

Marking the VAS requires you to use your professional judgment to determine whether the student's performance is consistent with entry-level practice in your specific setting. Before judging each of the performance criteria, consider each of the five performance dimensions listed on the next page:

Quality² of care
Supervision/guidance required²
Consistency² of performance
Complexity of tasks/environment²
Efficiency² of performance

These performance dimensions are common to all types and levels of performance. However, your expectations may change in each dimension as the student progresses toward entry into professional practice. As a reminder, the performance dimensions to be considered when marking the VAS are provided with each performance criteria on the bottom of the page.

Performance Dimensions

Quality refers to the degree of skill or competence demonstrated, the relative effectiveness of the performance, and the extent to which outcomes meet the desired goals.² A continuum of quality might range from demonstration of limited skill to a highly skilled performance. A student who exhibits high skill in performance but low efficiency or effectiveness would be marked lower on the VAS than one whose performance combined high skill with high efficiency or effectiveness.

Supervision/guidance required refers to the level and extent of assistance required by the student to achieve entry-level performance. As a student progresses through clinical education experiences,² the degree of monitoring needed is expected to progress from full-time monitoring or cuing for assistance to independent performance with consultation.² The degree of supervision and guidance may vary with the complexity of the patient or environment.

Consistency refers to the frequency of occurrences of desired behaviors related to the performance criterion. As a student progresses through clinical education experiences, consistency of quality performance is expected to progress from infrequently to routinely.

Complexity of tasks/environment refers to the multiple requirements of the patient or environment. The complexity of the environment can be altered by controlling the number and types of elements to be considered in the performance, including patients, equipment, issues, etc. As a student progresses through clinical education experiences, the complexity of tasks/environment should increase, with fewer elements being controlled by the CI.

Efficiency refers to the ability to perform in a cost-effective and timely manner. As the student progresses through clinical education experiences, efficiency should progress from a high expenditure of time and effort to economical and timely.

Anchors

Novice clinical performance indicates a student who provides quality care only with uncomplicated patients and a high degree of supervision.

Without close supervision, the student's performance and clinical decision making are inconsistent and require constant monitoring and feedback. This is typically a student who is inexperienced in clinical practice or who performs as though he or she has had limited or no opportunity to apply academic knowledge or clinical skills.

Entry-level performance on the VAS indicates a student who consistently and efficiently provides quality care with simple or complex patients and in a variety of clinical environments. The student usually needs no guidance or supervision except when addressing new or complex situations.

Examples of Completed Items

Appendix A provides three completed examples of a student's performance on the same criterion—Examination. Two examples illustrate competent and noncompetent student performances on final clinical experiences, and one example portrays satisfactory student performance during an intermediate clinical experience. These examples assist the evaluator in understanding how to mark the VAS and related boxes, how to substantiate markings with comments that serve to clarify and objectively describe student performance, how to use the five performance dimensions and sample behaviors in evaluating students, and how the level of clinical experience may influence performance expectations.

Reducing Rater Bias

All rating scales (numerical and VAS) are susceptible to similar response biases. The most common problems are halo bias and leniency. Halo bias occurs when a global impression of the student (eg, general liking) influences specific ratings. This leads individual behaviors to be more highly correlated than is actually true and tends to artificially increase or decrease all evaluations in response to the overall impression. This bias is avoided by careful attention to the specific behavioral criteria required for each individual competency and by conscious suppression of general impressions. Leniency is the tendency to avoid harsh evaluations, usually to avoid the discomfort associated with delivering bad news and its affect on a student's morale. This bias can be reduced by recognizing that students may achieve the entry-level criterion more efficiently if they are provided with accurate performance feedback.

Academic Coordinator of Clinical Education (ACCE)

The ACCE reviews the completed form at the end of the clinical experience and assigns a grade according to institution policy. A number of variables may be considered when assigning a grade and determining the success of the experience.

Determining a Grade

Each academic institution determines what constitutes satisfactory performance. Despite the lack of quantitatively explicit numbers, the VAS can be scored for grading purpose. Each line is 100 mm in length, allowing a number from 0 to 100 to be assigned easily to any mark. Grading decisions may consider: (a) the relative weighting or

importance of each item. (b) the level of student performance along the 100-mm VAS lines as a sum (aggregate) of all performance criteria scores or average VAS scores. (c) whether or not "significant concerns" or "with distinction" boxes are checked. and (d) the CI's narrative comments.

For example, an institution may assign a passing grade on a second clinical experience where the following conditions were met: (1) entry-level (ie. a score of 100) was achieved on each of the "red flag" items. (2) no "significant concerns boxes" were checked. and (3) the average score for the 24 VAS items was at least 75 (maximum score of 100). Academic institutions may want to develop grading schemes based on normative data accumulated over time on their own students at various levels of experience. It is expected that a student will achieve entry-level on every performance criterion, signifying readiness to enter the profession, by the end of the final clinical experience.

Support Services

For support regarding the use of the CPI for information not found in the Directions, read the section in the manual titled "Using the Clinical Performance Instrument" and "Responses to Frequently Asked Questions Pertaining to the Physical Therapist Clinical Performance Instrument" or review responses to frequently asked questions (FAQs) on APTA's Home Page (<http://www.apta.org>) under Education. You may also wish to contact the academic institution or individual ACCE, and/or contact APTA's Department of Physical Therapy Education.

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CLINICAL PERFORMANCE INSTRUMENT PHYSICAL THERAPIST STUDENT

STUDENT INFORMATION

Student's Name: _____

Date of Clinical Experience: _____ Course Number: _____

ACADEMIC PROGRAM INFORMATION

Name of Academic Institution: _____

Address: _____

(Department)

(Street)

(City)

(State)

(Zip)

Phone: (____) _____ ext. _____ Fax: (____) _____

E-mail: _____

CLINICAL EDUCATION SITE INFORMATION

Name of Clinical Site: _____

Address: _____

(Department)

(Street)

(City)

(State)

(Zip)

Phone: (____) _____ ext. _____ Fax: (____) _____

E-mail: _____

Clinical Instructor's Name: _____

Clinical Instructor's Name: _____

Clinical Instructor's Name: _____

Center Coordinator of Clinical Education's Name: _____

CLINICAL PERFORMANCE INSTRUMENT PHYSICAL THERAPIST STUDENT

1. Practices in a safe manner that minimizes risk to patient,² self, and others.

M ☐ F ☐

Not
Observed

Novice Clinical
Performance³

Entry-Level
Performance⁴

M ☐ F ☐
With
Distinction

SAMPLE BEHAVIORS

- a) Observes health and safety regulations.
- b) Maintains safe working environment.
- c) Recognizes physiological and psychological changes in patients and adjusts treatment⁵ accordingly.
- d) Demonstrates awareness of contraindications and precautions of treatment.
- e) Requests assistance when necessary.
- f) Uses acceptable techniques for safe handling of patients.
- g) Protects welfare of self, patient, and others in emergency situations.

Significant Concerns: Check below if performance on this criterion places student at risk of failing this clinical experience.



Midterm ☐

Final ☐

Midterm Comments: _____

Final Comments: _____

QUALITY OF CARE ♦ SUPERVISION/GUIDANCE REQUIRED ♦ CONSISTENCY OF PERFORMANCE
♦ COMPLETENESS OF TASKS/ENVIRONMENT ♦ EFFICIENCY OF PERFORMANCE

2. Presents self in a professional manner.

M ☐ F ☐

Not
Observed

Novice Clinical
Performance

Entry-Level
Performance

M ☐ F ☐

With
Distinction

SAMPLE BEHAVIORS

- a) Accepts responsibility for own actions.
- b) Is punctual and dependable.
- c) Completes scheduled assignments in a timely manner.
- d) Wears attire consistent with expectations of the practice setting.
- e) Demonstrates initiative.
- f) Abides by the policies and procedures of the practice setting.
- g) Adapts to change.

Significant Concerns: Check below if performance on this criterion places student at risk of failing this clinical experience.



Midterm ☐

Final ☐

Midterm Comments: _____

Final Comments: _____

QUALITY OF CARE ♦ SUPERVISION/GUIDANCE REQUIRED ♦ CONSISTENCY OF PERFORMANCE
♦ COMPLEXITY OF TASKS/ENVIRONMENT ♦ EFFICIENCY OF PERFORMANCE

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EXAMPLE: COMPLETED ITEM FOR INTERMEDIATE EXPERIENCE

11. Performs a physical therapy patient examination.*

M ☐ F ☐	Novice Clinical Performance M F Entry-Level Performance	M ☐ F ☐
Not Observed		With Distinction

SAMPLE BEHAVIORS

- a) Selects physical therapy examination methods relevant to the chief complaint, results of screening, and history* of the patient.
- b) Obtains accurate information by performing the selected examination methods.
- c) Adjusts examination according to patient response.
- d) Performs examination minimizing risk to the patient, self, and others involved in the delivery of the patient's care.
- e) Performs physical therapy examination procedures in a technically competent manner.

Significant Concerns: Check below if performance on this criterion places student at risk of failing this clinical experience.



Midterm ☐

Final ☐

Midterm Comments: Consistent with his level of academic preparation, he is able to select appropriate examination methods for simple patients but requires extensive input from the CI for patients with more complex neurological problems (Stupanski, Shah). Only occasionally requires supervision to perform examination methods accurately (sensory testing Wilson). Sometimes overtimes patients during the examination. He is usually able to complete his examinations in the allotted amount of time.

***Explanation for where the line is marked on the VAS for this example: Since this is an intermediate-level clinical experience, it is not expected that the student will perform at entry-level on this performance criterion. The patient load selected for the student was based on the objectives* for this clinical experience. The student is able to consistently and efficiently perform an examination with minimal supervision on uncomplicated patients. When patients have more complex responses, the student's need for supervision increases. Therefore, the VAS was scored at about 1/3 of the way toward entry-level.*

Final Comments: He is able to perform complete and accurate examinations of straightforward patients with orthopedic problems. He is beginning to be able to describe movement patterns often observed in patients with neurological disorders but continues to require frequent input from the CI to complete an examination on this type of patient. He now consistently monitors the patient's fatigue level during the examination. He consistently completes his examinations in the allotted amount of time.

***Explanation for where the line is marked on the VAS for this example: With the patient load designed to meet the objectives for this experience, the student performs high-quality treatments consistently and efficiently. He still requires supervision to examine more complex patients, but this is expected at this level. The VAS score has moved toward entry-level (approximately 2/3 way) to reflect his growth in meeting the objectives of this experience.*

EXAMPLE: COMPLETED ITEM FOR FINAL EXPERIENCE (Not Competent)

11. Performs a physical therapy patient examination.²

M ☐	F ☐					M ☐	F ☐
Not Observed		Novice Clinical Performance	M	F	Entry-Level Performance	With Distinction	

SAMPLE BEHAVIORS

- Selects physical therapy examination methods relevant to the chief complaint, results of screening, and history^s of the patient.
- Obtains accurate information by performing the selected examination methods.
- Adjusts examination according to patient response.
- Performs examination minimizing risk to the patient, self, and others involved in the delivery of the patient's care.
- Performs physical therapy examination procedures in a technically competent manner.

Significant Concerns: Check below if performance on this criterion places student at risk of failing this clinical experience.

☎ Midterm ☒ Final ☒

Midterm Comments: She frequently requires guidance to select all appropriate examination methods because she does not ask relevant background questions (Blackwell, Martinez, Williams). She selects examination methods that are inappropriate for the patient's diagnosis^s and condition (Roark, Able) and is unable to explain her choices when questioned. She is not accurate in performing many examination techniques. For example, she frequently fails to align the goniometer correctly and tends to place patients in uncomfortable positions during testing. She is frequently unable to complete her examinations in the allotted amount of time.

***Explanation for where the line is marked on the VAS for this example: To perform an accurate examination, this student on a final experience requires almost constant supervision. She has problems selecting appropriate examinations and performing them correctly. Her lack of skill in performing examinations causes her to exceed the time allotted for this activity. Therefore, the line on the VAS was placed about 1/3 of the way towards entry-level. These behaviors cause concern about the student's ability to successfully complete the clinical experience. Thus, the "Significant Concerns Box" was checked and the ACCE was called.*

Final Comments: She is more accurate in performing the required examination techniques, including goniometry. She still requires frequent guidance to select all appropriate examination methods and continues to occasionally select examination methods that are inappropriate for the patient's diagnosis and condition. Although she has improved somewhat, she still is often unable to complete her examinations in the allotted amount of time.

***Explanation for where the line is marked on the VAS for this example: Although the student has improved in some technical skills, she is inefficient and continues to require a high level of supervision in order to perform an appropriate examination. The score on the VAS was moved further along towards entry-level to acknowledge the noted improvements, but her overall performance in this area still remains below entry-level. Again, the "Significant Concerns Box" was checked.*

Letter of Support from NSU PT Acting Director

COLLEGE OF ALLIED HEALTH

January 6, 1998

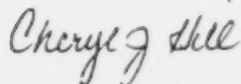
Gina Musolino
10931 NW 9th Ct.
Ft. Lauderdale, FL 33328

Dear Gina,

I reviewed your proposal to identify the extent to which physical therapy students during their professional studies here are attaining reflective practitioner characteristics. I am confident that the outcome of the study will provide us with the feedback we need to determine the level of our success in facilitating the evolution of these characteristics in our students. The development of a plan to incorporate more formalized self-assessment in our PBL curriculum will also be of considerable benefit to our program.

I appreciate your efforts to have this project directly related to the needs of this department. Please keep me posted on your progress with this study.

Sincerely,



Cheryl J. Hill, MS, PT
Acting Director
Physical Therapy Program

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Appendix E

Letter of Permission from Clinical Physical Therapist Researcher

December 5, 1997

Ms. Gina Musolino, MEd, PT
10931 NW 9th Court
Ft. Lauderdale, FL 33324-7337

Dear Gina:

This letter authorizes you to use information from my research article, "Clinicians' Perceptions of Self-Assessment in Clinical Practice", in Physical Therapy for your Doctorate in Education research activities. You have my permission to utilize the interview guide questions and coding categories and to modify them with regards to the student population. It is my understanding that you will give my work credit as appropriate and share your results with me when you have completed your study. I am excited that you are pursuing research in this area of study. If I can be of any additional help, please let me know. Good luck.

Sincerely,

A handwritten signature in cursive script that reads "Marianne R. Orest".

Marianne R. Orest, MEd, PT
Advanced Clinician
Fletcher Allen Health Care
Medical Center Hospital of Vermont Campus
Colchester Avenue
Burlington, VT 05401
802-656-2450
marianne.orest@vtmednet.org

MCNH Campus 111 Colchester Avenue, Burlington, VT 05401-1429 • 802 656 2348

In alliance with the University of Vermont

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Appendix F

Formative Committee Interview Guide Questionnaire

The following interview guide has been adopted with permission from Orest, (1995, p. 51). Please respond to the questions which follow with respect to the implementation of the interview guide to determine the self-assessment abilities of MPT learners.

(To be implemented if no substantive changes following formative committee review)

Interview Guide

1. In your practice or experiences what do you recognize as self-assessment?
2. Why do you think self-assessment is or is not important to be a competent professional?
3. Are there any barriers in your education or work to doing self-assessment? Discuss any types of support or lack of support for self-assessment as an MPT learner.
4. How are you encouraged or discouraged to self-assess by peers, faculty, superiors, colleagues or others?
5. What formal training or types of training would help to enable your self-assessment abilities?
6. Do you believe self-assessment is withing a person at all times and just needs to be challenged? Why or why not?
7. How should self-assessment be measured?
8. Is self-assessment teachable, or is it a natural skill that can only be nurtured?
9. Should the ability to self-assess be a criterion for admissions into an MPT program?
10. How do you perceive yourself and with what activities being a self-starter, self-directed, self-paced and self-steering?

I have been provided with a copy of this consent form.

Consent to Participate:

Signature: _____ Date: _____

Witness: _____ Date: _____

*Please return in the Self-addressed Stamped Envelope provided

Please respond to the following questions with respect to the interview guide.

Content

1. What items do you consider appropriate for inclusion in an open-ended interview guide for gathering information about MPT learners self-assessment abilities?
2. What type of items besides open-ended questions, if any, should be included in an interview guide?
3. Are the interview guide questions representative of self-assessment for an MPT learner? If yes, please describe, if no, please describe

Design

1. What length of interview would you deem most appropriate to gather information from MPT learners regarding self-assessment?
2. How many questions should be included in the interview guide?
3. Is the design of the interview guide appropriate, please explain?

General

Are there any other considerations need to be addressed in terms of an interview for self-assessment?

Thank you for your assistance! Please return in the

self-addressed stamped envelope provided by _____ date

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Appendix G
Sample Informed Consent Form
Program in Physical Therapy
Informed Consent Form

PROJECT TITLE: Sitting Beside Oneself: Development and Validation of a Self-Assessment Process for Physical Therapy Students and Graduates at Nova Southeastern University IRB Office (954) 262-5369

Advisor: Linda Howard, EdD Phone: (954) 262-8531

INVESTIGATOR: Gina M. Musolino, ABD, MSEd, PT PHONE: (954) 262-1284 or

EMAIL: musolino@fcae.nova.edu or GinaPT@aol.com (954) 473-8151

Address: 10931 NW 9th Ct. Ft. Lauderdale, FL 33324-7337

The purpose of this research project is two-fold: to develop and validate the self-assessment criteria and to create a plan based on this to incorporate self-assessment for MPT learners. Interviews will be conducted with MPT learner subjects and last approximately 40 minutes. During these interviews, question will be asked regarding your feelings and abilities about self-assessment as an MPT learner. These interviews will be audio recorded, then transcribed. These audiotapes will not be shared with NSU faculty, staff, administration or students, but the final report, containing anonymous quotations will be available to all at the end of the study. Following the transcription of the audio recordings, a copy will be provided to you for your verification signature and to provide any necessary clarification you may deem appropriate. There may be no direct benefits to you as a participant of this study, but there may be changes in educational and professional activities in PT following the completion of this study.

THIS IS TO CERTIFY THAT I, _____ (print name) HEREBY agree to participate as a volunteer in the above-named project.

I understand that there will be no health risks to me resulting from my participation in the research.

I hereby give permission to be interviewed and for these interviews to be tape-recorded. I understand that, at the completion of the research, the tapes will be erased. I understand the information may be published, but my name will not be associated with the research.

I understand that I am free to deny any answer to specific questions during the interviews. I also understand that I am free to withdraw my consent and terminate my participation at any time, without penalty.

I have been given the opportunity to ask whatever questions I desire, and all such questions have been answered to my satisfaction. I have been provided with a copy of this consent form.

Participant

Witness

Researcher

Date

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Appendix H

Summative Committee Likert-Scale Validation Questionnaire

Consent to Participate:

Signature: _____

Institution: _____

Title: _____

Phone: _____ Date: _____

Reviewing the proposed plan for implementation and evaluation of self-assessment for MPT learners, please rate the items below as 5, 4, 3, 2, or 1 using the following scale:

5 = Strongly Agree 4 = Agree 3 = No Opinion 2 = Disagree 1 = Strongly Disagree

Statement	Response				
1. The proposed plan elements are essential to assure the incorporation of self-assessment for MPT learners	5	4	3	2	1
2. The plan for evaluation is appropriate for MPT learners	5	4	3	2	1
3. The goals and objectives of the planned project are appropriate	5	4	3	2	1
4. The proposed methodologies are appropriate to attain the goals and objectives of the program	5	4	3	2	1
5. The proposed time frame for the implementation of the project is reasonable and appropriate	5	4	3	2	1
6. The proposed plan meets the expressed self-assessment needs of the MPT learners	5	4	3	2	1

(Continued)

Statement	Response				
7. The proposed plan and evaluation is practical for MPT learners	5	4	3	2	1
8. The proposed plan considers training needs of MPT learners, peers, academic and clinical faculty	5	4	3	2	1
9. The proposed plan identifies necessary resources and references	5	4	3	2	1
10. The proposed plan enhances collaboration and self-assessment for all learners and educators	5	4	3	2	1
11. The proposed budget is adequate	5	4	3	2	1
12. The proposed staffing is adequate	5	4	3	2	1
13. Overall, if the proposed plan is implemented, the plan will succeed in enhancing self-assessment for MPT learners	5	4	3	2	1

Please provide any additional comments:

Thank you for your assistance!

*Please return completed forms in the self-addressed stamped envelope provided by _____ date

COLLEGE OF ALLIED HEALTH

Appendix I

Committee Letter

May 11, 1998

Dear Committee Member:

You have been selected to participate in either my formative or summative committee for the purposes of my Major Applied Research Project. Your needs as a future physical therapy professional or health care educator are of utmost importance to the faculty at NSU and highly influential for curriculum development purposes. The purpose of this project is two-fold: to develop and validate the self-assessment criteria and to create a plan based on this to incorporate self-assessment for MPT learners, both students and graduates. Project Title: Sitting Beside Oneself: Development and Validation of a Self-Assessment Process for Physical Therapy Students and Graduates at Nova Southeastern University.

Please take a few minutes to complete the enclosed survey. Your completion of the forms and your signature implies consent to participate. Your participation is voluntary and refusal to participate involves no penalty. There may be no direct benefits to you as a participant in these committee activities, but there may be changes in educational and professional activities in PT following the completion of this study for NSU PT. There are no known risks to your participation in this committee work. Your responses will be kept confidential in that the responses will not be associated with your name and the data will be reported in aggregate format. Please be assured that your responses are confidential. After you have completed the questionnaire, please return the questionnaire to Gina Musolino in the enclosed self-addressed stamped envelope by May 15, 1998.

The NSU PT program is making every effort to best prepare future PT professionals. Your input is important to the development and planning process at NSU. Thank you for helping NSU and I continue to provide the best educational experience possible for future PT professionals. If you desire any further information with respect to the study, please contact me at either (954) 262-1284 or (954) 473-8151

Sincerely,

Gina M. Musolino, MSED, PT
Assistant Professor, NSU PT

Enclosure: Survey Form with signature line for consent to participate
Self-addressed stamped envelope

MARP Advisor: Linda Howard, EdD (954) 262-8531 IRB Office: (954) 262-5369
IRB Approval: EXEMPT HEALTH PROFESSIONS DIVISION

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MARP Proposal Signature Sheet

I certify that I have read and am willing to sponsor this major applied research project proposal submitted by Gina Maria Musolino. In my opinion, it conforms to acceptable standards and is fully adequate in scope and quality as a major applied research project proposal for the degree of Doctor of Education at Nova Southeastern University.

May 6, 1998
(date)

Linda Howard
Linda Howard, EdD
MARF Advisor

I certify that I have read this major applied research project proposal and, in my opinion, it conforms to acceptable standards for a major applied research project proposal for the degree of Doctor of Education at Nova Southeastern University.

May 15, 1998
(date)

Rene Villa
Rene Villa, EdD
Local Committee Member

This major applied research project proposal was submitted to the Central Staff of the Programs for Higher Education of Nova Southeastern University and is acceptable as partial fulfillment of the requirements for the degree of Doctor of Education.

May 21, 1998
(date)

Alan K. Cohen
Alan K. Cohen, EdD
Central Staff Committee Member

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